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Petri Mäntysaari

STOCKS FOR ALL: PEOPLE'S CAPITALISM IN THE TWENTY-FIRST CENTURY

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Preface

This is a book about how to rescue public stock markets and address financial inequalities by increasing the number of companies with publicly-traded shares and retail investors' direct shareholding. I chose the topic assuming that it was an impossible mission in legal science and therefore worth the effort. The topic turned out to be very difficult but not impossible. It took a new theoretical and methodological approach and five years to write this book. Since it took a lot of work to come this far, I decided to publish this research project as an open access book.

This book belongs to Commercial Law that I have defined as a theory-based scientific discipline. Such Commercial Law belongs to the higher-level discipline User-Friendly Legal Science.

The draft first chapter was presented for the first time at a SCANCOR seminar in Stanford in April 2017. I thank the SCANCOR community for great inspiration. I also thank my colleagues at Hanken School of Economics for many friendly and interesting discussions.

Vaasa, 29 October 2021 Petri Mäntysaari

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1 Introduction

1.1 The Themes and Purposes of this Book

> "Therefore during the modification of the descendants of any species, and during the incessant struggle of all species to increase in numbers, the more diversified these descendants become, the better will be their chance of succeeding in the battle of life." (*Charles Darwin*)[1]

> "We must make our choice. We may have democracy, or we may have wealth concentrated in the hands of a few, but we can't have both." (*Louis Brandeis*)[2]

Public stock markets are too small. The lack of companies with publicly-traded shares creates many problems. If publicly-traded shares are scarce, valuations are higher and there is an increased risk of bubbles. The lack of companies with publicly-traded shares can increase financial inequality, because retail investors are excluded from private stock markets. It can also make it more difficult to fund future pensions.[3] The fact that there are relatively few companies with publicly-traded shares is a symptom of wider problems with the existing regulation of companies, stock markets, and markets in general.

There are problems on both sides of the Atlantic. They should be addressed not only in the European Union but even in the United States.

This book has three broad goals. The first is to rescue public stock markets. The second is to increase financial equality. The third goal is to achieve a wider distribution of share ownership.

This book therefore has three concrete purposes. The first is to find ways to increase the number of companies with publicly-traded shares. There will be no wider distribution of shareholdings and no effective stock markets without a much larger number of companies with publicly-traded shares. The second is to find ways to make it easier for retail investors to invest in shares directly rather than through a financial intermediary.[4] Retail investors simply need to get a bigger share of the value generation that takes place in companies. The trend of der-

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1 Darwin C (1859) Chapter IV on natural selection.

2 Dilliard I (1941) p 42.

3 For example, a €2 trillion annual pension savings gap has been estimated for Europe. Group of Thirty (2019) p xvii.

4 Clayton J (2019): "I believe this situation—both the public hand and the private hand—should be addressed. We should: (i) increase the attractiveness of our public capital markets as places for companies to raise capital, and (ii) increase the type and quality of opportunities for our Main Street investors in our private markets."

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etailisation should be reversed.[5] The third is to propose design principles for a new regulatory regime for public limited-liability companies and stock markets designed to facilitate people's capitalism.

The connection between the lack of liquid investment alternatives, the high valuation of the scarce shares, and the severity of the inevitable correction probably was common knowledge already before the short market crash of 2020.[6] What may be even more important in the long term is the societal impact of concentrated share ownership. Financial polarisation can increase political polarisation and undermine liberal democracy as a form of government. Therefore, it seems reasonable to address ownership concentration and polarisation.[7] Doing so may become more urgent because of the effects of digitalisation and technological change.[8]

The book focuses on regulation and market practices in the EU and the US. Studying both regions can provide a better understanding of different regulatory choices, market practices, and their effects.[9] Moreover, there is a trend of convergence of the regulation of European and US stock markets. One cannot understand the future of EU regulation without some idea about what has happened in the much bigger US stock markets. But convergence is not a one-way-street. Some European regulatory practices might be useful in the US. While the proposals of the book primarily are intended to be used in the European policy discourse, they are so general that they can be applied in other regions as well.[10]

The first part of the book studies past regulatory and market practices from the nineteenth century to the present day. The second part is based on what one

---

5 Cartwright BG (2007): "So what do I mean by 'deretailization'? I mean to refer not only to the dwindling percentage of retail investors in some of our key existing markets, but also to the exclusion of retail investors entirely from some of the most important and dynamic new trading markets and new asset classes."

6 Caballero RJ, Farhi E, Gourinchas PO (2008) p 1; Robin Wigglesworth, Coronavirus mayhem reflects phenomenon of 'schock-led' markets. Financial Times, 6 March 2020.

7 Lindsey B, Teles SM (2017) p 8: "Unless we take steps to unrig our liberal democracy, we run a serious risk that the tide of authoritarian populism will extend itself, all the while entrenching the very crony capitalism that it purports to assault."

8 Executive Office of the President of the United States (2016) p 23: "Policy plays a large role in shaping the effects of technological change." Freeman RB (2018) p 75: "To prosper in an economy where robots do most of the work and earn most of the income, workers and citizens have to own a larger share of capital than they do today."

9 Fioravanti SF, Gentile M (2011) p 12.

10 There are recent proposals for US markets in Fox MB, Glosten LR, Greene EF, Patel MS (eds) (2018) and Fox MB, Glosten LR, Rauterberg GV (2019).

can learn from the past. The second part develops possible design principles for the regulation of the stock markets of the future.

There is no big and simple solution to the goals of this book. You need a package consisting of many actions, some of which may feel controversial.

Design principles. In this book, we will study and develop design principles. Design principles are connected to rational behaviour.

It is reasonable for rational people to choose good objectives and find ways to reach them. Aristotle called this form of rational behaviour practical wisdom.[11] According to Aristotle, one of the typical examples of the use of practical wisdom was the making of laws.

This form of rationality is used in what we call User-Friendly Legal Science.[12] User-Friendly Legal Science is a scientific discipline with its own point of view and mainly qualitative research methods. It is a design science. Its point of view is how actors can use legal tools and practices to reach their objectives in different contexts. Its primary sources consist of the documentation of legal tools and practices. Commercial Law can be defined as its sub-discipline in which the context is limited to markets. In Management-Based Commercial Law, actors are limited to firms.[13]

In the market context, the most important actors are firms. Each firm chooses its own legal framework to facilitate its business. In the context of the regulation of markets, however, the most important actor – or user of legal tools and practices – is the state. The "rules of the game" largely are made by the state.[14]

A design principle consists of one or more economic or societal goals chosen by the state and the legal tools and practices that the state uses to reach those goals. Laws are based on the use of such design principles to the extent that the making of laws is an organised and rational activity.

Society is a complex thing, but one can assume that today's society some extent is the outcome of past regulation and past design principles. If the state of society is not satisfactory, you need new design principles that lay down new goals and introduce new mechanisms for reaching them. To understand society, one can try to identify the regulatory trends and design principles

11 In Nicomachean Ethics, Aristotle called it phronesis.
12 Mäntysaari P (2017). Kitch EW (2005) p 35 on earlier non-normative approaches: "[T]here is much corporate scholarship that is not normative in its orientation: scholarship that describes regularities in the structure of corporate law or scholarship that tests theories against empirical information."
13 Mäntysaari P (2012).
14 Friedman M (1962).

that have contributed to its development.[15] Some design principles may have weathered the test of time. A study of earlier design principles can help to identify design principles that have worked well in the past and develop good design principles for the future.

Focusing on design principles can help to build new theory that is better aligned with societal reality and societal outcomes. Such new theory can help to replace company law and corporate governance theories that do not describe societal reality very well.

To use the distinction between *epistêmê* and *technê*, the study of past design principles can improve knowledge about *technê* and the development of new design principles is a form of *technê*. This book therefore is a tale of two methods and parts, both parts reflecting the point of view of User-Friendly Legal Science: actors use legal tools and practices to reach their objectives in different contexts.

Any knowledgeable reader might now wonder why new design principles and theory for capital markets are developed by one person rather than a research group with many members. Are capital markets not a very complex thing indeed? Is the regulation of capital markets not too complicated for any individual researcher to grasp? It is paradoxically for these reasons a single-author monograph could sometimes be superior to the work of a research group. To produce concrete solutions, the complex problem should first be understood. At the end of the day, the complex problem can only be understood by an individual. Abductive reasoning by an individual can contribute to better theory in the course of the research process. In contrast, a research group cannot be organised unless the individual members of the group first share a common theoretical framework.[16] This is the case especially in linear research. In social sciences, the need to organise the work of a research group makes the group gravitate towards the pre-existing paradigm. Where the common theoretical framework is inadequate or false, the use of results based on such research will just make the problem worse.

The interests of the firm. In this book, we focus on the interests of the issuer-firm.[17] An ideal type,[18] the firm is here understood as an organisational construc-

15 There are regulatory trends. For example, see Bork RH (1978) pp 418–419 on regulatory trends in US antitrust law.

16 See, for example, how economics was chosen as the common theoretical framework in Fox MB, Glosten LR, Rauterberg GV (2019) p 2.

17 The perspective matters and can influence the results of the study. See, for example, Kitch EW (2014) p 887: "Previously, I argued that the patent system not only creates incentives for innovation but also lowers transaction costs by making it easier for innovators to contract in relation to their innovation. Innovators need access to many different resources to turn their inno-

tion that has its own interests and objectives in different contexts.[19] In continental European company law, it is known as “das Unternehmen” or “l’entreprise”. If the firm uses the limited-liability company form and transferable shares, it uses them as legal tools to reach its own objectives: “The firm does the doing and the legal entity is a way to keep score.”[20]

The interests of the firm matter. Where corporate bodies act in the interests of the firm, the firm is more likely to survive and grow. It is assumed here that the firm is more likely to choose the public trading of shares where it is in the firm’s interests to do so, and less likely to choose the public trading of shares where it would be contrary to the firm’s interests.[21] The number of companies with publicly-traded shares (that is, the supply side with retail investors as the demand side)[22] is thus more likely to increase if regulation is better aligned with the long-term interests of issuer-firms.

From the perspective of the issuer-firm, the operation of a marketplace for the company’s shares is a question of “make” or “buy”,[23] or at least the operation of such a marketplace would be a make-or-buy question if the regulatory framework and technological inadequacies did not stand in the way. “Make” means here that the company operates its own marketplace to organise trading in its shares. “Buy” means that the company outsources this function to one or more financial intermediaries. From the perspective of the issuer-firm, the alternatives can thus be summed as:

- the absence of organised trading (bilateral trading);
- the choice to organise the issuer-firm’s own marketplace (“make”);

vation into a commercial product. Whereas the earlier work applied a broad-brush, top-down approach, this Essay takes the opposite approach by looking at the legal and regulatory barriers that affect the innovator’s access to one vital resource: money.”

18 For ideal types generally, see Weber M (1922).

19 Mäntysaari P (2010a); Mäntysaari P (2012) Chapter 4. For a discussion on fund management firms, see Ferrell A, Morley JD (2018).

20 Mäntysaari P (2010a) p 172. A related description but with a “team” is Blair MM, Stout LA (1999) p 269: “[W]e argue that shareholders, executives, and employees are all team members, and that the budget breaker is the corporation itself – the fictional legal entity that, under the law, holds title to the firm’s assets and serves as the repository for all its residual returns until they are paid out to shareholders or other stakeholders.”

21 See even Blair MM, Stout LA (1999) p 281: “[T]he choice to ‘go public’ may be driven in part by team production considerations.”

22 For the “sell-side” and the “buy-side” in financial markets in general, see paragraphs 66 – 67 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995 – Deutsche Börse / London Stock Exchange).

23 Coase RH (1937).

- letting the market sort out the organisation of marketplaces (laissez-faire or "buy"); and
- the choice to use an organised marketplace organised by a third party ("buy").

To increase the number of companies with publicly-traded shares and retail investors' direct investments in shares, regulators should study both make and buy alternatives.

The interests of founders and entrepreneurs. The firm is not the same thing as its founders or its entrepreneur. The interests of founders and entrepreneurs nevertheless matter.[24] When they control the firm, the decisions that they take on the firm's behalf can reflect their own interests. One can assume that a start-up or growth firm will have no publicly-traded shares unless it is what founders or entrepreneurs want.

People's capitalism. In this book, we work towards people's capitalism. People's capitalism is not a new idea. According to Justice Brandeis, there is no democracy without a broad distribution of wealth.[25]

In the 1950s, the NYSE wooed the small investor.[26] In 1968, Adolph Berle wanted "a stockholder's share in the United States [to be] distributed to every American family" through a "[w]ide distribution of stockholdings".[27] In 1985, Margaret Thatcher proposed a society "where owning shares is as common as having a car".[28] During the 1990s, US scholars found evidence of a correlation between stock ownership and political sentiments.[29] Republican theorists discovered that when people become shareholders, they start to identify as Republicans. George W. Bush sought to turn everyone into a shareholder in "the Own-

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24 See, for example, Hill J (2021).

25 Dilliard I (1941) p 42.

26 Sobel R (1977) p 73: "Under the leadership of President Keith Funston, the N.Y.S.E. wooed the small investor, not the large – this was the thrust of Funston's pet idea, People's Capitalism ..." Traflet JN (2013) p 1 citing NYSE President Keith Funston in NYSE 1951 Annual Report: "If we pursue our objectives with the strength of our convictions, we shall eventually approach our ideal, a nation of small share owners, a nation in whose material wealth ever citizen has a vested interest through personal ownership, a nation which is truly a people's democracy."

27 Berle AA (1968) p xxxv. See also Bratton WW (2001) p 760: "Berle and Means's assertion that corporate property should be placed on the public side of the line between public and private lives on in the appellation 'public corporation.' But otherwise, it no longer has any apparent adherents because it asks for a more collectivized society than anyone in the corporate law community will concede in these antisocialist times."

28 Speech to Conservative Party Conference, 11 October 1985; Edwards JR (2019) p 36.

29 See, for example, Nadler R (1999).

ership Society". The Ownership Society aimed to vest individual economic security in the financial markets through individual retirement accounts and health savings accounts invested in the stock market, and through broadened home ownership enabled by mortgage securitisation.[30] In the 1990s, the Swedish collective pension scheme changed into a system that includes a higher personal involvement.

There have been many ways to increase broader stock market participation. Janice Traflet summed up the factors that stimulated participation in the US stock market in the late twentieth century as follows: "a long bull market; retail brokerage innovations pioneenered by industry leaders like Charles Merrill; heightened popular awareness of securities regulations implemented during the New Deal; the rise of mutual funds; the passage of the Employment Retirement Income Security Act (ERISA) in 1974; commission rate deregulation in 1975; the introduction of 401(k) private retirement plans in 1978; and the rise of equity derivative products."[31] Moreover, US tax rules demand that employees saving for retirement or education put their money into equity and bond mutual funds in 401(k) and 529 plans.

According to a long-term trend, however, stock market investments are less and less direct. Direct share ownership has largely been replaced by indirect share ownership. Indirect share ownership seems to have contributed to financial inequalities (section 1.4). In 2018, Financial Times, a newspaper, warned against a market in which "wealthy owners, financiers and other big businesses are funding start-ups that stay private in a kind of closed loop".[32]

One may ask whether there is an alternative. Justice Brandeis proposed the elimination of the banker-middleman "where he is superfluous".[33] We will study ways to reduce dependence on intermediaries and increase direct shareholding.

Financial innovation. Obviously, it will not be possible to increase the number of companies with publicly-traded shares and retail investors' direct share ownership very much without financial innovation. The past design principles discussed in this book are examples of earlier financial innovation. The new de-

30 Davis GF, Cotton NC (2007); Davis GF (2010); Cotton Nessler NC, Davis GF (2012).

31 Traflet JN (2013) p 5.

32 The FT View. At a record high, the US market is still shrinking. Financial Times, 24 August 2018.

33 Brandeis LD (1914) p 109. For an example of a case when middlemen are superfluous, see Owen Walker, Corporate access: death of the go-between. Financial Times, 21 April 2018. Rules based on MiFID II require brokers to put a price on "corporate access". Customers have chosen to eliminate the middleman.

sign principles proposed in this book can be examples of future financial innovation.

There is room for financial innovation and financial revolutions will happen in the future just as they have happened in the past.[34] For example, the long-term pattern is that "products offered initially by intermediaries ultimately move to markets".[35]

The service product offered by traditional stock exchanges might not be an exception. If trading has become a commodity and fragmented,[36] one may ask what stock exchanges are for and why an issuer-firm should not be permitted to use its own marketplace instead.

Should issuer-firms be able to organise trading internally without outsourcing this function to the operator of a traditional stock exchange? Of course, they should use a traditional stock exchange when it is in their interests to do so. But this is not always the case. Should issuer-firms be allowed to turn to the operator of a fintech platform when organising trading internally or through an outsource provider? Centralised trading on stock exchanges should be an alternative to decentralised trading facilitated by digital platforms that compete for users. Many market participants might welcome such a change. Existing operators, banks, and fintech firms might want to provide technology and services to facilitate the operation of such trading venues. In effect, traditional stock exchanges would then be complemented by market-based solutions. In this book, we propose the development of "microexchanges" for this purpose, and a new company form we call the "small public limited-liability company" for companies that use a microexchange.

Policy preferences. There is a limit to what a reform of company and capital market laws can do. Many other things will be necessary to reduce financial inequalities. First, ordinary people need jobs, decent wages, affordable education, and affordable health care before they can have money to spare.[37] Second, you need the right policy preferences. Financial inequalities will not be addressed unless they matter in the policy discourse. Some political programmes such as

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34 See, for example, Jia-Ming Z, Morss ER (2005) p 204: "Over the last century the financial sector developed in sophistication and in ability to mobilize savings for a variety of purposes. The following financial revolutions emerged: 1. The institutional revolution. 2. The risk-adjustment industry. 3. Changing money mechanisms. 4. Changing criteria for a good investment. 5. Changing criteria for a strong currency."

35 Merton RC, Bodie Z (2005) pp 14 – 15, citing Finnerty J (1988) and Finnerty J (1992).

36 Macey JR, O'Hara M (2005) p 569.

37 See already Rathenau W (1917b) pp 148 – 151.

market fundamentalism or crony capitalism are designed to increase financial inequalities rather than reduce them.[38] Third, for financial inequalities to matter, you need to take a holistic perspective. Some economic theories and policies increase financial inequalities by failing to take into account societal externalities.

Fortunately, policy preferences may be shifting in some countries. The shifting policy preferences are reflected in the adoption of the UN Sustainable Development Goals (SDGs) in 2015. These goals – such as promoting inclusive and sustainable economic growth, employment and decent work for all (SDG 8) – can set the tone for the policy discourse. The shifting policy preferences are reflected in the work of OECD. The themes of OECD Forum 2019 were introduced as follows: "This year's Forum will reflect on the fact that we are experiencing a great deal of social, economic and political change, upheaval and disruption, largely amplified by the dual forces of digitalisation and globalisation. People are still hurting from the worst economic, financial and social crisis of our lifetimes, and see no end to job uncertainty, high debt, weak pay packets, and widening inequalities. Anxiety about their situation is spilling over into politics, driving people apart rather than bringing us closer together. The Forum will explore ways to transform these increasing expressions of uncertainty and anger into collective commitment for positive action."[39] The shifting societal preferences are reflected both in the economic discourse[40] and in the legal discourse. In 2020, the problems were amplified by the covid-19 crisis.

Contents. In this book, Chapter 1 sets the scene. We already laid down the themes and purposes of the book. We will also study the bigger picture consisting of the concentration of wealth (section 1.2), the lack of companies with publicly-traded shares (1.3), rents in financial intermediation (section 1.4), and the need to adopt better rules (section 1.5).

Chapters 2–4 will focus on the historical evolution of design principles in company law (Chapter 2), stock exchange law (Chapter 3), and securities law (Chapter 4) in some European countries and the US since the nineteenth centu-

38 See, for example, Lawrence Summers, A Republican tax plan that will help the rich and harm growth: Are shareholders really the most worthy recipients of a windfall? Financial Times, 5 November 2017.

39 Website of the OECD Forum 2019.

40 Offer A, Söderberg G (2016). See also Social Democracy, the Nobel Prize in Economics and the Market Turn. Speech of Avner Offer (University of Oxford), OECD NAEC seminar, Paris, 5 February 2015.

ry.[41] Chapter 5 will briefly discuss recent markets practices in all these areas to identify the objectives of various market participants and to understand what rules they tend to choose when they have a choice.

In other words, the purpose of Chapters 2–5 is to describe how market behaviour and regulatory behaviour really were to the extent that it is possible to describe such complex things.[42] This part of the book is a study of *technê*. It is necessary for the rest of the book, because it is much easier to draft design principles for future market regulation if one understands the evolution of design principles over a long time period.

Chapters 6–9 are *technê*. The purpose of this part of the book is to choose ends and describe means to reach the chosen ends. The challenge is to figure out whether the means would work. Historical experiences may give some guidance.

In Chapter 6, we develop design principles for the future development of company and capital market law. We distinguish between policy principles, strategic design principles, and operational design principles. We propose many complementary design principles in order to increase the number of companies with publicly-traded shares and retail investors' direct share ownership. These design principles range from fostering the interests of the firm (das Unternehmen, l'entreprise) to creating a new kind of venue for secondary trading in shares and creating a transatlantic stock market.

In Chapter 7, we try to find out whether crowdfunding would help to increase the number of companies with publicly-traded shares and retail investors' direct shareholding. Unfortunately, equity crowdfunding with its low volumes does not seem to provide the solution to the massive problems discussed in this book.

In Chapter 8, we propose design principles for a new kind of marketplace that we call the "microexchange". In Chapter 9, we propose design principles for a new company form we call "the small public limited-liability company" designed for firms that want to use the microexchange. Chapter 10 contains a summary.

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41 This distinction resembles the difference between the Börsengesetz, Aktiengesetz and Wertpapierhandelsgesetz in German law. In this book, however, the distinction was functional rather than driven by any normative areas of law.

42 The originator of this point of view in historical research is Leopold von Ranke. For a similar approach inspired by historical methods, see, for example, the method used by Walker in his article about the Paris Bourse in late nineteenth century. Walker DA (2001) p 187. See even Baskin JB, Miranti PJ Jr (1997) p 3 arguing that the modern theory of finance needs to take greater recognition of "path dependence and historical evolution".

1.2 The Concentration of Wealth

In an ideal world, the accumulation of wealth is the outcome of economic processes that benefit society as a whole. The outcome should also be socially acceptable and perceived as fair.

However, the world is not perfect. Financial inequality in developed countries has reached levels last seen before or just after the First World War.[43] There must be something wrong with how the financial system works. Financial inequalities were increased by the covid-19 crisis.

Of course, the concentration of wealth could partly be an illusion.[44] If it is real, it could be caused by many things. The failings of the financial system might not be the only thing to blame. The factors that have contributed to the concentration of wealth include, for example, technological change, income inequality, the financialisation of economy, the globalisation of business, and the concentration of business. We can have a brief look at these drivers of inequality.

Digitalisation and technological change. Technological advancement and digitalisation can benefit society in the long run. However, they can create problems as well.

Between 1995 and 2015, the middle-skill share of employment fell by 9.5 percentage points in the OECD area, while the shares of high- and low-skill occupations rose by 7.6 and 1.9 percentage points, respectively. Job polarisation has been driven by pervasive and skill-biased technological changes.[45] For example, less people are needed in manufacturing to make the same products.[46]

Digitalisation and network effects can lead to the-winner-takes-all situations[47] and the concentration of economy.[48] They in turn contribute to job polarisation,[49] income inequality, and the concentration of wealth.[50] A study covering

43 Davies H (2015) p 16; Saez E (2017).

44 The analysis of Auten and Splinter suggests that the income share of top 1% earners has changed relatively little in the US since the 1960s. Auten G, Splinter D (2019).

45 OECD Employment Outlook 2017. The key message of the OECD Employment Outlook 2019 is that the future of work will largely depend on the policy decisions countries make. See also Executive Office of the President of the United States (2016).

46 Muro M (2016); Williams JC (2017) p 83.

47 Brynjolfsson E, McAfee A (2014).

48 Andrews D, Criscuolo C, Gal PN (2016).

49 Goos M, Manning A (2007); Autor D, Lawrence H, Katz F, Kearney M (2006).

50 Executive Office of the President of the United States (2016) p 2: “Research consistently finds that the jobs that are threatened by automation are highly concentrated among lower-paid, lower-skilled, and less-educated workers … One possibility is superstar-biased technological change, where the benefits of technology accrue to an even smaller portion of society than

all US firms between 1978 to 2012 found that most of the rise of inequality in pay is because some companies have been paying more than others: virtually all of the rise in earnings dispersion between workers is accounted for by increasing dispersion in average wages paid by the employers of these individuals.[51]

Digitalisation has made the-winner-takes-all situations possible mainly by facilitating the business of technology or online platforms that rely on network effects. US antitrust law and EU competition law have so far failed to curb the growth of such monopolies or oligopolies.[52]

Income inequality. The concentration of wealth has a connection to income inequality. While income is the cash that people earn through work, transfers, or rents, wealth is the money they accumulate over time. Income inequality has risen in most OECD countries over the past three decades.[53] Income inequality may have been increased by reduced worker power[54] as well as the corporate practice of outsourcing low-paid work to contractors and executive pay to capital markets.[55]

While income inequality increases the concentration of wealth, accumulated wealth can generate capital income and increase income inequality. Wealth is more unequally distributed and financial assets are much more unequally distributed than income.[56]

Financialisation. One of the drivers of the unequal distribution of financial assets is financialisation. The notion of financialisation covers a wide range of phenomena[57] that have increased the financial industry's share of GDP in recent

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just highly-skilled workers. The winner-take-most nature of information technology markets means that only a few may come to dominate markets." See also p 20 and Brynjolfsson E, McAfee A (2014).

51 Song J, Price DJ, Guvenen F, Bloom N, von Wachter T (2019).

52 According to Bork, efficiency is the only social goal antitrust is suited to promote. Bork RH (1978) pp 79 and 81; Williamson OE (1979). See also Wu T (2018) on the dangers of concentration.

53 OECD (2015a) p 20.

54 Stansbury A, Summers LH (2020).

55 Willman P, Pepper A (2020).

56 OECD (2015a) p 34.

57 Epstein G (2005); Stockhammer E (2008): "The notion of financialization covers a wide range of phenomena: the deregulation of the financial sector and the proliferation of new financial instruments, the liberalization of international capital flows and increasing instability on exchange rate markets, a shift to market-based financial systems, the emergence of institutional investors as major player on financial markets and the boom (and bust) on asset markets, shareholder value orientation and changes in corporate governance (of non-financial business), increased access to credit by previously 'underbanked' groups or changes in the level of (real) interest rates."

decades.[58] The financial sector of developed economies grew fast in the 1980s and very fast in the 1990s. Growth was particularly fast in the leading financial centres London and New York.[59]

Many think that increasing financialisation means a higher level of financial development and that financialisation is a good thing. In 1911, Joseph Schumpeter argued that the services provided by financial intermediaries are essential for technological innovation and economic development.[60] However, financialisation has increased the concentration of wealth and contributed to rising inequality.[61]

Globalisation of business. The globalisation of business has increased the size of global firms. A larger firm can benefit from economies of scale in a bigger marketplace. Globalisation has contributed to increased productivity at globally competitive firms that try to beat their global peers.[62] This has helped to cement the dominance of incumbent firms and raised entry barriers for new entrants: "[I]t is increasingly more the established businesses, as opposed to young start-ups, which become the globally most productive firms".[63] While small, young firms create new employment, "it is the old, large firms that generate most of the increase in productivity".[64] Larger firms therefore have higher mark-

58 Davies H (2015) pp 8–9: "In the United States, in 1980 the financial sector accounted for about 4.9 per cent of GDP. By 2006, which is so far the peak, it was around 8.3 per cent of GDP."

59 Engelen E, Grote MH (2009) p 679.

60 Schumpeter JA (1911). See also Rajan RG, Zingales L (2003) p 12: "Regardless of the way we measure, the average level of financial development in 1913 is quite high, comparable to that in 1980 or 1990 ... Most countries have the same number of listed companies per million people in 1913 as in 1980 ... In some countries, even with the explosion of financial markets during the late 1990s, the 1913 level has not been surpassed." According to Demirguc-Kunt A, Levine R (2009), financial development helps improve economic opportunity and reduce inequality.

61 Davies H (2015) p 16. See also Kajanoja L (2017).

62 Andrews D, Criscuolo C, Gal PN (2015) p 12 paragraph 22: "... the rising gap in productivity growth between firms at the [global frontier] and other firms since the beginning of the century suggests that the capacity of other firms in the economy to learn from the frontier may have diminished. This is consistent with: i) longer run evidence of increasingly slower penetration rates of new technologies (e.g. Comin and Mestieri, 2013); and ii) winner takes all dynamics or 'superstar effects' that have characterised the global economy over this period (Gabaix and Landier, 2008)."

63 Andrews D, Criscuolo C, Gal PN (2015) p 13 paragraph 24.

64 Heyman F, Norbäck PJ, Persson L (2018). See also Andrews D, Criscuolo C, Gal PN (2015) p 14 paragraph 25: "To the extent that young firms possess a comparative advantage in commercialising radical innovations ... the rising age of firms at the global frontier may foreshadow a slowdown in the arrival of radical innovations and productivity growth."

ups.[65] What follows is polarisation between larger firms with higher profits and higher wages on one hand and smaller firms with lower profits and lower wages on the other. The growth of the size of firms is one of the factors likely to increase the concentration of business and reduce the number of listed firms (for other factors, see Chapter 5).

Concentration of business. The drivers of the concentration of wealth include the concentration of business.[66] Concentration seems to be the norm not only in global markets and in platform economy but even nationally and in traditional sectors. For example, Chandler has described how the concentration of American business started at the end of the nineteenth century,[67] and a 1963 study described the concentration of business and income in large American securities firms.[68]

The concentration of business and the resulting concentration of wealth were made to look more legitimate by the Chicago school. In the 1970s, economists from the Chicago school argued that big firms were not a threat as such on grounds that excessive profits should attract new entrants.[69] The Chicago school became mainstream.[70]

There can be a connection to financialisation as well. The financial business model adopted in many sectors of the economy has made many large non-financial firms focus on their "core" business and divest other activities. They have done this for three main reasons that create a spiral of increasing concentration of business and increasing concentration of wealth.

The first is to increase market share and profits. Increased concentration of business has weakened competitive constraints, made it easier for the incumbent firm to do business, and increased the profits of the incumbent firm.[71]

The second is to increase share price and the financial rewards of executives. Financial investors prefer a rising share price in the short term. Divestments as such can help to reduce the conglomerate discount and increase share price, and

65 De Loecker J, Eeckhout J, Unger G (2019); Autor DH, Dorn D, Katz LF, Patterson C, Van Reenen J (2020).

66 Kahle KM, Stulz RM (2017); Grullon G, Larkin Y, Michaely R (2019).

67 Chandler AD Jr (1977).

68 Special Study of Securities Markets (1963a) pp 18 – 19.

69 See, for example, Posner RA (1978) p 945.

70 The Economist, Schumpeter. The University of Chicago worries about a lack of competition. Its economists used to champion big firms, but the mood has shifted, 12 April 2017.

71 Lindsey B, Teles SM (2017) p 21: "So why talk about industry concentration in this chapter? The reason is that increasing concentration can be more than a cause of bad rents; it can also be a consequence of them. The creation of entry barriers makes it tougher for new entrants, thus reducing the number of firms contesting a given market."

profits from divestments help to increase the distribution of funds to shareholders in the form of dividends or share buybacks. At the same time, these measures can increase the financial rewards of top executives. Under the financial business model, the financial incentives of executives have often been connected to share price.[72]

The third main reason is to benefit from low interest rates. Historically low interest rates in the recent years have increased M&A activity.

Regulation. The concentration of wealth seems to be the result of many things. In any case, the accumulation of wealth and the allocation of wealth have greatly been influenced by regulation.[73] Both are obviously influenced by taxation and could be changed by the taxation of inheritance and wealth.[74] But regulation affects the concentration of wealth even in many other ways. There seems to be something wrong with the regulation of public stock markets.

1.3 The Lack of Companies with Publicly-Traded Shares

Stock markets can be "private" or "public". Trading in private markets is based on bilateral relationships. Private markets are informal, discretionary, and opaque. Retail investors have in normal cases no access to private stock markets. In contrast, public markets are regulated markets. Public markets are regulated in multiple areas of law such as company law, stock exchange law, and securities law. Public markets tend to be transparent and accessible to retail investors.[75]

Almost all firms in the world are private. Stock markets are hardly efficient when virtually all firms in the world are outside public stock markets. According to the World Bank and the World Federation of Exchanges database, the number of listed companies in the world was mere 43,342 in 2018 with hardly any growth since 2006.[76] Both the number of IPOs and the amount of equity raised by companies declined from 1993 to 2012 according to OECD.[77] In the US, the number of listed firms was 25% less at the end of 2016 than in 1975 and 52% less than its peak in 1997. In 1975, the US had 22.4 listed firms per million inhabitants and just

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72 See Batt R, Appelbaum E (2013).

73 Stiglitz JE (2013); Piketty T (2014). See also Lafer G (2017) pp 2 and 18, citing Appelbaum E, Batt R (2014) pp 27–29.

74 Piketty T (2014); Guvenen F, Kambourov G, Kuruscu B, Ocampo-Diaz S, Chen D (2019).

75 For a definition of private and public markets, see, for exmaple, Ferrarini G, Saguato P (2014) pp 5–6.

76 The website of World Bank.

77 Weild D, Kim E, Newport L (2013) pp 34–35.

11.2 by 2016.[78] The US has fewer listed firms than other countries with similar characteristics.[79] This is recognised as a problem.[80]

The lack of companies with publicly-traded shares can increase financial inequality, because retail investors cannot participate in wealth generation that happens in private companies. This is an issue of growing concern.[81] The lack of listed companies forces retail investors to choose other investments that may not be optimal (section 1.4).

In recent years, private markets have become more and more popular with professional investors.[82] It would, therefore, be necessary to find out what is wrong with the regulation of public stock markets and whether something can be done to cure the problem.

1.4 Rent-Seeking and Market Failure

Regulation is neither good nor bad as such. Regulation can be used for many purposes and in many ways. Laws facilitate markets[83] by setting out "the rules of the game".[84] Laws are a way to balance conflicting societal interests according to political preferences.[85] Markets are in other words never "free"[86] and market

78 Doidge C, Kahle KM, Karolyi GA (2018) p 8; de Fontenay E (2017) pp 454–458.

79 Doidge C, Karolyi GA, Stulz RM (2017); Kahle KM, Stulz RM (2017).

80 Clayton J (2019).

81 *Ibid.*

82 See The Economist, Privacy and its limits, 1 February 2020: "Right now almost everyone believes that private markets are better than public ones … Institutional investors are rushing headlong onto private markets, especially into venture capital, private equity and private debt." See even Merryn Somerset Webb, Private equity is a club and the ordinary investor is not invited. Financial Times, 28 August 2020.

83 Ostrom E (2005); Ostrom E (2010).

84 Friedman M (1962).

85 Heck P (1914). For capital markets, see, for example, Weild D, Kim E, Newport L (2013) p 40: "A capital market is a multi-layered, complex ecosystem of competing and related interests. There are numerous constituents, each of whom must be governed by rules and encouraged by incentives. Those markets that succeed in balancing these many interests are those markets that ultimately will go the farthest in facilitating capital formation."

86 Coase RH (1988) p 9 on commodity exchanges and stock exchanges: "It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are highly regulated … It suggests, I think correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed … [T]hey exist in order to reduce transaction costs

regulation is never value-free.[87] Market regulation both reflects societal change and is a major driver of societal change.

Financial markets are highly regulated for many good reasons. First, you need a legal framework for financial transactions. Second, the legal framework should try to help to allocate capital to good uses by reducing transaction costs, agency costs, and the costs of bad decision-making processes. Third, you need to strike a balance between the interests of issuers and investors, and between their interests and the interests of financial intermediaries. Fourth, you need to protect the resilience and stability of the financial system.

Generally, regulation and the legal framework facilitate the business of the financial industry, that is, financial intermediation. Financial intermediation should belong to the plumbing of financial markets and help to allocate capital to good uses.

The textbook description of financial intermediation tends to focus on its benefits: "[F]inancial intermediaries play an important role in the economy, because they provide liquidity services, promote risk sharing, and solve information problems, thereby allowing small savers and borrowers to benefit from the existence of financial markets. The success of financial intermediaries in performing this role is evidenced by the fact that most Americans invest their savings with them and obtain loans from them. Financial intermediaries play a key role in improving economic efficiency because they help financial markets channel funds from lender-savers to people with productive investment opportunities. Without a well-functioning set of financial intermediaries, it is very hard for an economy to reach its full potential."[88]

However, stock markets are neither efficient nor liquid in the light of the fact that so few companies are public. Moreover, the regulation of financial markets contributes to financial inequalities. The legal framework of capital markets seems to foster rent-seeking rather than the efficiency of capital markets or what could be perceived as fair or socially acceptable outcomes. Markets seem to be rigged for the benefit of large financial intermediaries.[89] We can have a brief look at the problem.

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and therefore to increase the volume of trade." See also La Porta R, Lopez-de-Silanes F, Shleifer A (2006) pp 1–2 indicating that there are no unregulated securities markets.

87 See Polanyi K (1944/2001) Chapter 6.

88 Mishkin FS, Eakins SG (2012) p 67.

89 The Kay Review (2012) paragraph 3.7: "The decline in the role of the individual shareholder has been paralleled by an explosion of intermediation. Between the company and the saver are now interposed registrars, nominees, custodians, asset managers, managers who allocate funds to specialist asset managers, trustees, investment consultants, agents who 'wrap' products, retail

The cost of financial intermediation. To understand the effects of regulation on financial intermediation and financial inequalities, one can start with the financial rewards of financial intermediaries.

Financial intermediaries are compensated for providing various kinds of necessary services,[90] or at least they should be compensated for providing services that are necessary.[91] The income received by financial intermediaries measures the aggregate cost of financial intermediation.[92] While the financial industry has grown and the financial industry's share of GDP has been increasing in many developed countries in recent decades, the unit cost of financial intermediation has not gone down for customers.

The fact that the unit cost of financial intermediation has not gone down is surprising, because competition, innovation, and economies of scale tend to reduce unit costs. According to Thomas Philippon, the efficiency of financial intermediation in the US has not really improved since the 1880s.[93] Guillaume Bazot discovered that the unit cost of financial intermediation mainly increased in Europe over a period of 40 years.[94] According to a 2016 report from the Financial Conduct Authority (FCA), a UK regulator, "mainstream actively managed fund charges have stayed broadly the same for the last 10 years"[95]. The report says that the high operating margins of UK fund-management firms are characteristic of an oligopoly rather than a competitive market.[96] Active fund managers do not seem to compete on price at all. According to the report, economies of scale are captured by fund managers.[97]

At the same time, institutional investors in general and investment funds in particular have captured a larger share of stock markets. In its Capital Markets

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platforms, distributors and independent financial advisers. Each of these agents must employ its own compliance staff to monitor consistency with regulation, must use the services of its own auditors and lawyers and earn sufficient to remunerate the employees and reward its own investors."

90 Philippon T (2015).

91 See Lewis M (2015) arguing that financial intermediaries can be paid vast sums of money for compromising investors' interests.

92 Philippon T (2015).

93 Philippon T (2015).

94 Bazot G (2014).

95 Financial Conduct Authority (2016) 1.18.

96 *Ibid.*, 1.21: "Asset management firms have consistently earned substantial profits across our six year sample, with an average profit margin of 36%. These margins are even higher if the profit sharing element of staff remuneration is included."

97 *Ibid.*, 1.20.

Union action plan,[98] the European Commission pointed out that while "[t]he share ownership of insurers and pension funds dropped from more than 25% of the EU stock market capitalisation in 1992 to 8% at the end of 2012", "[i]nvestment funds increased their share of ownership of EU stock markets from less than 10% in the 1990s to 21% in 2012."[99] In the US, investment funds have captured a much larger share: "In 1965, 84% of the equity in American listed companies was in the hands of individuals, against 16% in those of institutional investors. At the beginning of the 1990s, in contrast, 46% of the ownership of these companies was concentrated in the hands of investment funds ..."[100] The figures look much worse today after decades of deretailisation.

Philippon and Reshef have shown that pay in US finance started to accelerate fast relative to other sectors at the end of the twentieth century.[101] In other words, financial intermediaries and their executives have made too much easy money in recent decades.

There could be a connection between the distribution of wealth, the size of the financial sector, and the cost of financial intermediation. First, the high cost of financial intermediation is likely to transfer wealth from the many in the non-financial sector to the few in the financial sector and thus increase wealth inequality. Second, a large financial sector contributes to income inequality.[102] There is more than anecdotal evidence of many savers being worse off because of the financial intermediaries' high incomes.[103]

There is a point after which further growth in financial activity no longer contributes to growth but slows it down and makes most people relatively poorer.[104] Whether that point has already been reached remains open, but there is reason for concern.

The potential harming of investors can be illustrated with four examples.[105] First, a 2014 report from the European Federation of Financial Services Users discovered that the real returns (returns after inflation) from private pension schemes were negative over a 14-year-period from the end of 2000 to the end

98 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final.

99 *Ibid.*, section 4.2.

100 François P, Lemercier C, Reverdy T (2015), citing Useem M (1996).

101 Philippon T, Reshef A (2012).

102 Philippon T, Reshef A (2012); Piketty T (2014); Davies H (2015) pp 11 and 16.

103 The Economist, Saving for retirement. Prudence penalised. European savers have suffered terrible returns from pension funds, 4 October 2014.

104 Cecchetti SG, Kharroubi E (2012).

105 See also Morley J (2014) p 1237 on Jack Bogle's scepticism.

of 2013 in Belgium, France, Italy, Spain, and the United Kingdom.[106] Second, US hedge funds are "very often a bad investment for everyone except hedge fund managers".[107] The hedge fund industry's large fixed management fees represent a high cost for pension funds. Costs are even higher in funds of funds.[108] This has led to losses for pension funds.[109] CalPERS decided to withdraw all its investments in hedge funds in September 2014 after branding hedge funds too complex and costly. What CalPERS does matters, because CalPERS is the largest public pension fund in the US.[110] Third, in 2018, Pennsylvania's state treasurer argued that the state's two largest public pension funds had wasted $5.5bn in fees paid to poorly performing Wall Street private equity investment managers over 10 years and that much of the fees would have been avoided by choosing an index-tracking strategy.[111] According to a 2020 study, private equity managers expected the performance of their funds to decline as a result of the covid-19 crisis.[112] Fourth, a 2019 Group of Thirty (G30) report pointed out that changes in the organisation of pension savings in some countries have increased costs and reduced scale economies. The net impact of a shift from public to private provision and from collective (defined benefit) schemes to self-funded and self-managed (defined contribution) schemes "appears clearly negative".[113]

The connection between regulation and rent-seeking. One may ask whether the high incomes of financial intermediaries at least partly are rents. Markets do indeed seem to be rigged to produce rents.[114]

In competitive markets, savers would have good alternatives to the use of the services of financial intermediaries. They do not seem to have sufficient alternatives in today's markets.

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106 BETTER FINANCE for all (2014) p 11.

107 Webber D (2018) p 81.

108 The Economist, Funds of funds. Not dead yet. A reviled form of investment is trying to reinvent itself, 7 June 2014; AFT (2017).

109 Parisian E, Bhatti S (2015).

110 CalPERS Eliminates Hedge Fund Program in Effort to Reduce Complexity and Costs in Investment Portfolio. CalPERS, News, 15 September 2014.

111 Chris Floyd, Pennsylvania state treasurer condemns $5.5bn pension fee 'waste'. Financial Times, 9 July 2018.

112 Gompers PA, Kaplan SN, Mukharlyamov V (2020).

113 Group of Thirty (2019) pp xviii – xix and 59.

114 See also Lindsey B, Teles SM (2017) pp 8 and 28: "Market rigging by the already powerful is the primary mechanism by which high status is entrenched … When government policies create rents, the end result is always to redistribute income from groups with less political power to groups with more. This is true by definition: in this context, political power consists of the ability to win distributional struggles over fixed resources."

In fund management, there is hardly sufficient price competition if you can read in many books that fund managers charge "2 and 20".[115] Regardless of underperformance and the lack of price competition, institutional investor participation in hedge funds quintupled in the US in the five years following the adoption of the National Securities Markets Improvement Act of 1996.[116] Markets therefore seem to be rigged for the benefit of fund managers.

Markets also seem to be rigged for the benefit of firms that are regarded as "too big to fail" (TBTF). For example, there are global systemically important financial institutions[117] that are regarded as too important to let fail.[118] Firms that are TBTF benefit from an implicit government guarantee that gives them a substantial advantage over competing firms by lowering their funding costs.[119] One can note that the phenomenon of private sector bailouts is not limited to banks.[120] In 2020, US airlines called for $50 billion in emergency support after lavishing 115 % of their free cash flow on share buybacks since 2014.[121] Generally, the largest public companies seem to be TBTF, because the economy is TBTF.

For the purposes of this book, it is important that markets generally seem to be rigged for the benefit of financial intermediaries at the cost of retail investors.

115 See, for example, Webber D (2018) pp 81 – 83 and 105.

116 Webber D (2018) p 84: "In short, if a fund managed $25 million or more in assets – as almost all public pension and labor unions do, it could invest in hedge funds." Section 209(b) of the National Securities Markets Improvement Act of 1996: "QUALIFIED PURCHASER.—Section 2(a) of the Investment Company Act of 1940 (15 U.S.C. 80a–2(a)) is amended by adding at the end the following new paragraph: '(51)(A) 'Qualified purchaser' means— … (iv) any person, acting for its own account or the accounts of other qualified purchasers, who in the aggregate owns and invests on a discretionary basis, not less than $25,000,000 in investments.'"

117 See paragraph 32 of Basel Committee on Banking Supervision (2011) (Basel III) and Basel Committee on Banking Supervision (2013). See also recital 90, point 30 of Article 3(1) and Article 131 of Directive 2013/36/EU (CRD IV).

118 See also International Monetary Fund (2012) p 143: "The chapter concludes with a few tentative recommendations for regulatory reform and other financial policies to deliver preferred outcomes. These include … (3) ensuring a more concrete discussion of how concentration of banking system assets in just a few large banks might hold the economy hostage through large, expensive implicit government guarantees."

119 Economic Report of the President Together with the Annual Report of the Council of Economic Advisers, January 2017, Chapter 6, Box 6 – 4, pp 394 – 398.

120 Mbaye S, Badia MM, Chae K (2018).

121 FT reporters, US airlines call for $50bn in emergency support so survive crisis. Financial Times, 16 March 2020; Jonathan Ford, Opinion. US airlines show it is time to switch off buyback machine. Financial Times, 22 March 2020.

Some have blamed unfair tax laws,[122] regulatory capture,[123] over-zealous regulators that have taken investor protection too far, or the political agenda of courts.[124] At a deeper level, however, policy generally is influenced by economic elites,[125] and financial regulation tends to reflect the interests of financial intermediaries (bankers).[126] This old phenomenon[127] was clear to see in the liberalisation spree of the 1980s and 1990s[128] that increased the number and types of financial intermediaries,[129] and in the adoption of the financial business model that replaced the managerial business model in the US and many other countries and increased the allocation of corporate funds to institutional shareholders.[130]

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122 See Webber D (2018) pp 154–155; Fleischer V (2008). Victor Fleischer's article called the treatment of carried interest "an untenable position as a matter of tax policy" and began a debate on the topic.

123 Stigler GJ (1971); Lindsey B, Teles SM (2017) p 5. See already Smith A (1776) Book I, Chapter X: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."

124 See Sunstein CR, Vermeule A (2015) p 435: "Today's disfavored agency is the SEC." See also Webber D (2018) pp 48–63 on the proxy rule and the Business Roundtable lawsuit. Business Roundtable v Securities and Exchange Commission, 647 F3d 1144 (DC Cir 2011).

125 Stigler GJ (1971); Gilens M, Page BI (2014) p 565 and 572: "The central point that emerges from our research is that economic elites and organized groups representing business interests have substantial independent impacts on U.S. government policy, while mass-based interest groups and average citizens have little or no independent influence … Not only do ordinary citizens not have uniquely substantial power over policy decisions; they have little or no independent influence on policy at all."

126 Calomiris CW, Haber SH (2014); Davies H (2015) pp 55–57; Lewis M (2015) p 211.

127 Lenin VI (1917) Chapter II; Brandeis LD (1914); Auerbach J, Hayes SL (1986) pp 16–17; Lewis M (2015) p 109.

128 Davies H (2015) pp 9–10: "Why did the financial sector grow so rapidly, beginning around 1980, and why did that growth accelerate so sharply before the crisis? One explanation is that a wave of deregulation through the 1980s and 1990s allowed financial firms to expand their activities." See also Appelbaum E, Batt R (2014) pp 27–29; Fergus D (2018); Lafer G (2017) p 18: "A series of legal and regulatory changes beginning in the 1970s … triggered a wave of hostile takeovers and leveraged buyouts and led nearly all publicly traded companies to reorient their operations in order to maximize short-term return to shareholders. Whether in response to shareholder demands or to pre-empt takeover attempts by boosting earnings per share, the country's premier corporations began diverting resources away from investment in plants, labor, or technology in order to free up cash for stock buybacks, increasingly generous dividends and other investor payouts." European Parliament (2017) p 7: "The period from the 1970s to the mid-1990s was dominated by innovation based on institutional changes and new legal instruments resulting from financial liberalisation and deregulation, both domestic and international."

129 Jia-Ming Z, Morss ER (2005) p 205.

130 François P, Lemercier C, Reverdy T (2015).

The connection between past regulation and the growth of financial inequalities at the cost of retail investors can be summed up with the following seven key points.

First, the regulation of the financial industry has created high barriers to entry. Regulators may of course have had good intentions. Regulation can be designed to protect investors against bad investments and bad service providers, ensure a level playing field between the suppliers of products and services that are functional equivalents, facilitate the integration of markets, and protect the stability of the financial system.[131] The scope and intensity of the regulatory regime is a political choice. However, it is a choice that greatly influences the level of competition. So far, it has contributed to the concentration of the financial industry and played in the hands of large players such as TBTFs. The asset management industry is becoming more concentrated as well.

Second, the regulation of stock markets and the duties of listed companies have largely been designed to foster the interests of institutional investors that prefer to invest in liquid shares issued by large companies. At the same time, institutional investors increasingly invest in high-risk asset classes such as private equity and venture capital.[132] Since there are less new listings and less listed companies than there used to be[133] and could be,[134] the "functional link" between private and public equity markets is broken.[135]

Third, since there is a relatively small number of listed companies in the world, it has become more difficult for retail investors to make stock investments without overpaying. The laws of supply and demand have raised the price of publicly-traded shares to levels that do not reflect issuers' long-term prospects.

131 See, for example, recitals 3–4, 37, 42, 86–87, 133, 156 and 164 of Directive 2014/65/EU (MiFID II).

132 See, for example, Lerner J, Tufano P (2012) pp 541–542 on how industry observers attributed much of the shift to the U.S. Department of Labor's clarification of the Employee Retirement Income Security Act's "prudent man" rule in 1979.

133 Gao X, Ritter JR, Zhu Z (2013); Weild D, Kim E, Newport L (2013) p 26.

134 Weild D, Kim E, Newport L (2013) p 15.

135 Gilson RJ, Black BS (1998): "[W]e make explicit a functional link between private and public equity markets: The implict contract over future control that is permitted by the availability of exit through an IPO helps to explain the greater success of venture capital as an organizational form in stock-market centered systems." Weild D, Kim E, Newport L (2013) pp 22 and 39: "Given the current structural deficiencies in the U.S. stock market, a merger or an acquisition is now the exit strategy of choice for many small companies that previously would have chosen to go public."

If retail investors cannot participate in value generation in companies that are currently privately-owned, financial inequalities will continue to grow.[136]

Fourth, the lack of liquid investment alternatives forces retail investors to turn to financial intermediaries that are in a better position to invest in illiquid assets.[137] Retail investors can choose between fund shares or insurance policies.[138] Regulators may again have had good intentions. For example, all investors cannot invest in illiquid assets such as real estate. Real estate investments are capital intensive and coupled with high transaction costs, high operational costs, and limited diversification opportunities for most savers. However, the lack of retail investors' alternative and liquid direct investment opportunities is likely to increase the income and wealth of financial intermediaries and reduce retail investors' relative share of income and wealth.[139]

Fifth, since cross-border investments are constrained by securities and tax laws, retail investors that prefer to invest in foreign securities must often turn to financial intermediaries.

Sixth, the lack of investment alternatives can contribute to bubbles. The net wealth of retail investors can be reduced or wiped out when the bubbles burst:[140] "When there's too much money around, it creates really bad things."[141]

Seventh, where the regulation of securities markets is designed to foster the interests of financial intermediaries, regulation will increase financial inequality

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136 The FT View. At a record high, the US market is still shrinking. Financial Times, 24 August 2018.

137 See, for example, The Economist, Alternative reality, 29 June 2019; The Economist, Like a ton of bricks, 27 June 2020.

138 See, for example, Auerbach J, Hayes SL (1986) p 1: "[T]oday individuals are a much reduced source of direct investment funds. Individual investors are now largely represented through pension funds, professional managers, trust departments, investment companies, and employers' savings and profit-sharing plans." Jia-Ming Z, Morss ER (2005) p 207: "Until the 1980s, stock brokers served as the primary agents for the buying and selling of stocks. After that, mutual funds took over."

139 The Kay Review (2012) paragraph 3.5: "Individual shareholders (including individuals who hold through nominee accounts) now own around 11% of UK equities. The steady decline in direct ownership of shares by small investors has recently been offset by a rise in the proportion held by employees and (increasingly) directors."

140 See, for example, European Central Bank (2016); Europäer verloren Vermögen in der Krise. Frankfurter Allgemeine Zeitung, 24 December 2016, p 21; Stiglitz JE (2013).

141 Howard Marks, founder of Oaktree, interviewed in: Javier Espinoza and Miles Johnson, Oaktree founder warns private equity standards slipping. Financial Times, 27 May 2018.

more in a society that is more dependent on securities markets for organising savings. This is the case particularly in the US.[142]

Market failure. It may be possible to explain at least part of the financial inequalities in developed countries by a market failure. The financial intermediation industry simply does not seem to face enough competition. In the absence of alternatives to financial intermediaries, financial intermediaries can extract rents. This finding is not new and is shared by many writers ranging from Louis Brandeis to Vladimir Ilyich Lenin.[143]

Like all market failures in the financial markets, the lack of competition has its own causes. We identified some of them. At a more general level, Merton and Bodie have named possible causes for the existence of differences between the neoclassical paradigm and the actual workings of the financial system: existing institutional rigidities, technological inadequacies, and dysfunctional behavioral patterns that cannot be offset by institutional changes.[144] All three possible causes look relevant in this context (but perhaps not in the way Merton and Bodie meant). In this book, it is argued that: existing institutional rigidities are the outcome of overregulation designed to benefit financial intermediaries at the cost of retail investors and non-financial firms; the risk of dysfunctional behavioral patterns has been used as a rhetorical trick to regulate away retail investors' access to direct share ownership as an alternative to the use of financial intermediaries;

142 See, for example, Hazen TL (2009) p 1: "Securities occupy a unique and important place in American life. They are the intruments which evidence the financial rights, and in some cases the power to control, the corporations which own the great bulk of the nation's productive facilities. They are the instruments through which business enterprises and governmental entities raise a substantial part of the funds with which to finance new capital construction. They are the instruments in which many millions of Americans invest their savings to provide for their retirement income, or education for their children, or in hopes of achieving a higher standard of living." See Reamer N, Downing J (2016) on the "democratisation of investment".

143 Lenin VI (1917) Chapter II: "As banking develops and becomes concentrated in a small number of establishments, the banks grow from modest middlemen into powerful monopolies … [W]e must first of all examine the concentration of banking." Brandeis LD (1914) p 110: "[T]he banker controls the only avenue through which the investor in bond and stocks can ordinarily be reached. The banker has become the universal tax gatherer." Auerbach J, Hayes SL (1986) pp 16–17; Stiglitz JE (2020) p 113: "The financial sector exemplifies in so many ways what is wrong with our economy. The sector has been the example par excellence of rent-seeking …" Lewis M (2015) p 109: "Financial intermediation is a tax on capital; it's the toll paid by both the people who have it and and the people who put it to productive use. Reduce the tax and the rest of the economy benefits."

144 Merton RC, Bodie Z (2005) p 13. See also Oliver Wyman (2012): "The financial system is failing in its basic function of intermediating savers and borrowers, especially savers and borrowers with long-term needs."

and technological advancement could facilitate such direct investments at low cost while at the same time providing ways to protect retail investors.

1.5 Better Regulation

Wealth should not be distributed to financial intermediaries as rents. You need better regulation to address market failures and the lack of competition. Generally, inequalities could be addressed by introducing distributional considerations into industrial and competition policy.[145] In the stock market, you need a new regulatory framework to increase the supply of stocks (by increasing the number of companies that the public can invest in) and make it possible for supply and demand to meet (by reducing constraints on retail investors' direct investments in shares).

Existing steps. While the US and the EU have already taken some steps in this direction, there is still a long way to go.

In the US, the Jumpstart Our Business Startups (JOBS) Act of 2012 was intended to make it easier for companies to raise capital privately, stay private longer, or go public.[146] Title IV of the JOBS Act of 2012 directed the SEC to adopt rules exempting from the registration requirements of the Securities Act offerings of up to $50 million of securities annually.[147] The JOBS Act was even intended to "democratize the ability for Americans to lend as equity investors through crowdfunding".[148] Title III of the JOBS Act added an exemption from registration for certain crowdfunding transactions[149] and permitted under Regulation Crowdfunding equity crowdfunding subject to some constraints.[150] As regards publicly-traded companies, Title I of the JOBS Act exempted "emerging growth companies"[151] from certain disclosure duties and other obligations.

The JOBS Act was not the only piece of legislative action intended to increase share issuings and investments. In 2018, the key provisions of the Dodd-Frank

145 Atkinson AB (2015).

146 For the background, see Weild D, Kim E, Newport L (2013) pp 9–10.

147 Section 401 of the JOBS Act added Section 3(b)(2) to the Securities Act of 1933. The SEC adopted the necessary rules in Regulation A+ that expanded the earlier Regulation A.

148 The 2017 Joint Economic Report (115th Congress), Chapter 6, pp 122–137, at p 133.

149 Section 302 of the JOBS Act added Section 4(a)(6) to the Securities Act of 1933.

150 SEC Release No. 33–9974 (Regulation Crowdfunding). See Heminway JM (2017).

151 Section 101(a) of the JOBS Act added Section 2(a)(19) to the Securities Act of 1933 as follows: "(19) The term 'emerging growth company' means an issuer that had total annual gross revenues of less than $1,000,000,000 ..." The thresholds are indexed for inflation. Section 101(b) of the JOBS Act added a similar Section 3(a)(80) to the Securities Exchange Act of 1934.

Act were revised by the Economic Growth, Regulatory Relief, and Consumer Protection Act. Title V of the Act is intended to encourage capital formation. In 2019, the SEC adopted Regulation Best Interest.[152] Regulation Best Interest requires brokers to act in the "best interests" of their clients when recommending investments.

In Europe, the purpose of MiFID II[153] is to "facilitate the further development of specialist markets that aim to cater for the needs of smaller and medium-sized issuers", among other things. MiFID II permits the creation and registration of a new sub-category of SME growth market[154] within the category multilateral trading facility (MTF).[155] SME growth markets are subject to lighter regulatory requirements.[156] The common regulatory standards in the EU for SME growth markets are a compromise between various regulatory goals.[157]

Building on MiFID II, the European Commission launched its own Capital Markets Union action plan in September 2015.[158] The action plan is intended to "deepen the Single Market further and make it fairer".[159] The action plan, which seeks to develop market-based finance in EU countries, focuses on SMEs. It aims to make it easier for SMEs to list their shares on public markets. The Commission is working on concrete actions.[160] The Commission has already taken steps to increase crowdfunding in Europe.[161] Actions are certainly necessary to increase investment and growth in the EU.[162]

152 SEC Release No. 34 – 86031 ("Regulation Best Interest: The Broker-Dealer Standard of Conduct"). See also Barbara Roper, The SEC's plan to protect retail investors is short on detail. Financial Times, 9 May 2018.

153 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

154 Point 12 of Article 4(1) of Directive 2014/65/EU (MiFID II).

155 Point 22 of Article 4(1) of Directive 2014/65/EU (MiFID II).

156 Article 33(3) of Directive 2014/65/EU (MiFID II).

157 Recitals 132 and 133 of Directive 2014/65/EU (MiFID II).

158 COM(2015) 468 final, 30 September 2015.

159 The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final.

160 Capital Markets Union – Accelerating Reform. Communication from the Commission, COM(2016) 601 final.

161 Crowdfunding in the EU Capital Markets Union. European Commission, Commission Staff Working Document, SWD(2016) 154 final; Regulation (EU) 2020/1503 of the European Parliament and of the Council of 7 October 2020 on European crowdfunding service providers for business, and amending Regulation (EU) 2017/1129 and Directive (EU) 2019/1937.

162 Odendahl C, Springford J (2021): "Gross fixed capital formation – a broad measure of investment – grew a meagre 0.7 per cent a year in the US between 2016 and 2019, a rate that,

Much more should be done to make the issuing of shares to the public and the public trading of shares sufficiently attractive to the supply side, that is, firms and entrepreneurs.

More to be done. To increase the number of companies with publicly-traded shares and retail investors' direct share ownership, the to-do-list is not limited to increasing access to funding, reducing the direct costs of capital, and reducing the direct cost of regulatory compliance.

Policy-makers and regulators should address fundamental questions. How can company law help firms to be successful and grow? Can there be an alternative to financial intermediation? Can one create an alternative to stock exchanges? How can one reduce firms' direct and indirect costs connected to shareholders, the share ownership structure, and the funding structure? Can one increase retail investors' direct share ownership not only nationally but even across borders? How can ordinary people have more money to spare?

In practice, many of these questions are connected. From the perspective of a start-up,[163] shareholders and the share ownership structure bring costs and benefits.[164] The choice of the funding structure will influence the future of the firm as can be illustrated with the following short observations. Without equity funding, the firm will die. If the firm has access to generous venture capital funding in the growth phase, the firm may be able to run massive losses for long periods and build market share.[165] This would not be possible with debt funding alone. Venture capital investors customarily demand corporate power and require an exit in a few years' time. A traditional stock exchange listing is not an alternative to venture capital. A listing brings its own benefits but comes with heavy regulatory compliance obligations (such as corporate governance duties aligned with the interests of institutional investors), increases the cost of shareholders (such as the cost of distributions to shareholders, the cost of decisions taken in the interest of shareholders, and the cost of structural takeover defences),[166] and may make it more difficult for the firm to compete against firms that have more discretion to do whatever it takes to prevail in competition

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with some wild quarterly swings, continued in 2020. In the eurozone, however, it shrank by 0.8 per cent a year between 2016 and 2019, before falling by another 1.6 per cent in 2020."

163 The firm is here regarded as an idealtypical organisation also known as "l'entreprise" in French company law and as "das Unternehmen" in German company law. For ideal types generally, see Weber M (1922). For the firm as an ideal type in commercial law, see Mäntysaari P (2012) Chapter 4 and Mäntysaari P (2017) section 7.5.

164 Mäntysaari P (2010a) Chapter 9; Mäntysaari P (2012) section 7.9.

165 See Kenney M, Zysman J (2019).

166 See François P, Lemercier C, Reverdy T (2015).

(such as burn capital to increase market share and create positive network effects). Retail investors cannot participate in venture capital investments directly. The scarcity of listed companies forces retail investors, in the absence of alternatives, to buy scarce publicly-traded shares that are overpriced.

The fundamental questions will be discussed in greater detail in this book.

At first glance, the problem might not seem to be related to access to funding at all. Established companies generally do not use a stock exchange listing for the purpose of raising funding. Start-ups and growth firms have many alternative sources of funding. According to anecdotal evidence, "[t]here is more money than there are good ideas".[167] The funding sources that compete for good portfolio companies range from angel investors, crowd-funding websites, and accelerators to various kinds of venture capital investors and investment funds.[168] Even customers can be used as a source of funding. Funding sources have been increased by the digitalisation and globalisation of business. The availability of various alternative funding sources can help to reduce problems caused by the limited access of growth firms to bank funding.

Having said this, access to funding should be improved. There can be funding issues for start-ups and growth firms even in an environment with more money than good ideas. Access to funding may depend on many things. One is the area of business. There are hyped-up business areas and herd behaviour in venture capital especially in areas with network effects,[169] and there are business areas that the venture capital industry is not interested in. Start-ups may not be able to raise funding in a "kill zone" around tech giants. Moreover, access to funding may depend on location, gender, ethnicity, and other things, and funding is complemented by ancillary services. The diversity of business makes it necessary to ensure diversity in funding sources as well.

Digitalisation. Digitalisation is a two-edged sword. Digitalisation has played a major role in creating both wealth and inequalities. Digitalisation must play a major role in increasing the distribution of shareholdings and financial equality.

167 Howard Marks, founder of Oaktree, interviewed in: Javier Espinoza and Miles Johnson, Oaktree founder warns private equity standards slipping. Financial Times, 27 May 2018.

168 See Sahlman WA (1990); Gilson RJ (2003); Hoffman DL, Radojevich-Kelley N (2012); Kenney M, Zysman J (2019).

169 Bikhchandani S, Sharma S (2000); Kenney M, Zysman J (2019): "What is particularly interesting is that the current financial euphoria is concentrated on funding platform economy firms."

On one hand, digitalisation contributes to the concentration of economy. Positive network effects give large firms a competitive advantage.[170] Digital platforms tend to increase non-standard work with lower pay.[171]

On the other, digitalisation and the availability of low-cost computing will facilitate new business models. Financial technology (fintech) may help to change capital markets.[172] Fintech has already taken on the banks in their core business of payments and lending. Low-cost exchange-traded funds (ETFs) have overtaken hedge funds as an investment vehicle. Depending on future regulation, fintech may increase the transparency of investments, help retail investors take rational investment decisions, improve the quality of investment advice,[173] and provide new kinds of trading platforms.

In the future, big tech with billions of users and superior access to information will be in a good position to provide financial services.[174] It is in the nature of big tech platforms to grow and absorb new areas.

Conclusions. Because of the complex nature of the problem and the powerful trends contributing to the concentration of share ownership and wealth, there are limits to what new design principles for company and capital market law can do. Broader actions will be required to reduce inequality.[175]

Existing regulation has contributed to a market failure. Financialisation and the financial business model have increased the allocation of funds to financial intermediaries, CEOs, and rich individuals. There are too few companies with publicly-traded shares. Traditional stock exchange listings are not attractive enough to non-financial firms. It is difficult for retail investors to invest in growth firms. The scarce supply of stocks drives retail investors to use the services of financial intermediaries. Financial intermediaries can extract rents. The share of financial intermediaries of production has increased at the same time as wealth and income inequalities have increased.

Company and capital markets law can contribute to the attainment of societal goals. Better design principles can be developed for the future regulation of

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170 Kenney M, Zysman J (2019): "While the costs of launching software-based startups has fallen dramatically, the cost of instantiating a dominant platform into an existing economic sector has risen dramatically, as has the time and cost required to establish the dominant position."
171 OECD (2016).
172 For the potential of fintech, see Accenture (2014).
173 For financial adviser misconduct, see Egan M, Matvos G, Seru A (2017).
174 For the entry of large technology firms (big techs) into financial services, see BIS Annual Economic Report, 23 June 2019, Part III "Big tech in finance: opportunities and risks".
175 Stiglitz JE (2015).

capital markets in order to increase the number of successful firms, companies with publicly-traded shares, and retail investors' direct share ownership.

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PART I: **The Evolution Of Design**

2 Trends in Company Law

2.1 General Remarks

The development of company law alone cannot explain why there are so few companies with publicly-traded shares and why the share of retail investors' direct stock ownership is so low. Neither can it alone show what should be done to change the trend. However, company law is a rich source of design principles, provides a good introduction to the relevant political preferences and values, and clearly can be part of the solution.

Existing company laws are the result of years of trial and error. When developing design principles for the company laws of the future, we should learn from the hits and misses of the past. Future design principles should be anchored in company law's long-term evolution and reflect regulatory practices that have worked.

Nothing in company law comes from nature. Company laws have been made to fulfil needs according to the preferences of lawmakers. This should influence the study of company law. For example, the transferability of shares has been regarded as a traditional characteristic of limited-liability companies and is reflected in the provisions of company law. But why was it deemed necessary to adopt legal norms that lay down the transferability of shares? Is the free transferability of shares a central aspect of company law in the first place? More generally, what are the policy objectives of company law? There must be underlying design principles that give answers to these questions. To answer such questions, we should study company laws comparatively, historically, and with a holistic research approach.

Unfortunately, it may be difficult to compare the company laws of different countries and perhaps even more difficult to study the evolution of company law in different countries over time.

The objectives of company law and securities markets law depend on their societal functions and may vary depending on the country, the stage of society's technological advancement and economy, and the prevailing economic and political preferences.

Since the norms that are perceived as "company law norms" in legal dogmatics do not necessarily share the same societal functions in different countries, the doctrinal "company laws" of different countries are not comparable as such. This can be illustrated with the company laws and securities laws of the US, France, and Germany. While US company law statutes tend to have a rather limited scope, many questions relating to corporate finance and corporate

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governance fall within the scope of US securities law. The central German statute that regulates public limited-liability companies (Aktiengesetz, AktG) has a broader scope and can address some issues that in the US would fall within the scope of securities law.[1] The same can be said of French law. French corporate law and securities law are not separate legal topics. They are part of the same code.[2] A comparative study of particular aspects of US, French, and German "company law" would not give a true and fair view unless all relevant functional equivalents were taken into account.[3]

To study "company law" in different jurisdictions, we will, therefore, need an initial theory that includes societal functions and designates the relevant "company law" or other norms and practices through their functions.[4] Depending on the choice of theory, one can end up studying different "company laws".[5] In principle, the initial theory can be refined in the course of the study by abductive reasoning and a holistic research approach.

In the following, we will start with company law theory to choose a frame of reference for the study of the historical development of "company law" in the chosen jurisdictions. After falsifying the contractarian theory of company law (section 2.2), we will study the matrix theory of company law (section 2.3) and choose it as the basis of our study. In practice, we will end up with a notion of company law that is functional and includes many core issues of corporate governance and corporate finance.

In the light of the matrix theory of company law, the international evolution of company law is not linear. Different things may happen in different countries at the same point in time. Different countries may follow different paths meaning that the same things will not happen in different countries at different points in time. Since the evolution of company law is not linear, we will focus on the emer-

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1 Mäntysaari P (2005) Chapter 6.

2 Fanto JA (1998a) p 31: "French corporate law and securities law are not separate legal topics, but are part of the same legal code."

3 See, for example, Hopt KJ (2019a) III.1(a): "The fact remains that company law and securities regulation not only complement each other so that they are, at least in part, functionally interchangeable, but even in legal terms there is much common ground, similarity of concepts, and points of contact between them. This must also be taken into consideration when looking at comparative company law."

4 There are alternatives. For example, one could study "company law" through language or choose a narrative for the evolution of company law. For legal history, see Mäntysaari P (2017) section 6.3.3. Generally, see Foucault M (1972) on the evolution of discourse.

5 For an example of an alternative theory, see Edwards JR (2019) pp xvi and 6–7 on the use of agency theory to describe the historical development of financial accounting.

gence and evolution of certain design principles rather than historical developments on a time-line.

After choosing the theoretical framework and identifying some key functional issues, we will have a look at the development of company law and its design principles in certain jurisdictions that have been important for its historical development (section 2.4). We will particularly focus on France, Germany, England, and the US.

2.2 The Contractarian Theory

You need a theory to understand company law. Generally, one can distinguish between theories of companies and theories of company law.[6] Because of its impact on company law discourse, we can study whether the contractarian theory of company law really is a theory of company law.

The contractarian theory of company law has its roots in the notion of a company as a contract in traditional English common law. English company law has treated the company's articles of association as a "statutory contract" between shareholders. In economics, the contract theory of the firm[7] repeated English legal history.[8] The contractarian theory of company law merged both discourses.

The pioneers of the contractarian theory of company law, Easterbrook and Fischel argued that corporations are enduring relational contracts, equity investors are holders of residual claims, and managers are agents of equity investors.[9] The contractarian theory of company law was summed up by a legal scholar as

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6 Mäntysaari P (2012) Chapter 5

7 See Kállay B (2012) p 43 on the two groups of contract theories of the firm. In one of the groups the parties are able to make complete contracts (the firm as a nexus of treaties and the principal-agenty theory). In the other, the parties are only able to make incomplete contracts (the transaction costs theory and the property rights theory). Nexus of treaties: Alchian AA, Demsetz H (1972); Jensen MC, Meckling WH (1976). The principal-agent theory: Holmström B, Milgrom P (1994). The transaction cost theory: Williamson OE (1975); Williamson OE (1985). The property rights theory: Grossman SJ, Hart OD (1986); Hart OD, Moore J (1990); Hart OD, Moore J (1995).

8 Bratton WW (1989) pp 1502, 1510 and 1513: "The doctrinal theory of the firm may be traced, in America, to Angell and Ames, the leading antebellum corporate law treatise ... Despite different terminology and modes of legal analysis, and despite assertive repudiation of past conceptions, these 'modern' reformulations in the end only recreated the historical definitions' picture of the firm ... The new economic theory confirms and repeats legal history when it asserts that the corporation 'is contract.'" See Mäntysaari P (2010a) section 5.3.2.

9 Easterbrook FH, Fischel DR (1991) pp 90–91.

follows: "Corporate law has come to be understood as a system of multi-party contractual relationships, a subpart of contract law. Corporate law provides default rules that can be varied by the parties."[10]

Despite its popularity, the contractarian theory of company law can be falsified as a theory of company law. First, the contractarian theory of company law fails to define company law as it says very little about the scope and contents of company law. For example, the contractarian theory of company law cannot explain why securities law is or is not part of company law and, to the extent that securities law is regarded as part of company law,[11] why its nature is mandatory.[12] Second, the contractarian theory of company law cannot explain why the provisions of contract law are not applied as default rules to the internal relationships of the company.

One could of course argue that the mere fact that the contractarian theory is called "contractarian" does not require the existence of any legal instruments recognised as contracts and complemented by the sanction system of contract law; the contractarian theory might be called "contractarian" because its representatives would like company law to consist of freedom of action as the default rule[13] according to their own subjective preferences.[14]

In any case, the contractarian theory looks like a theory of companies (that are regarded as contracts) rather than a theory of company law (that can describe the contents of company law).[15] It simply does not say much of the

10 Kitch EW (2005) p 35.

11 See, for example, Hopt KJ (2019a) III.1(a): "The American system is characterized … by the co-existence and interlinking of company law, which remained within the domain of the states, and federal securities regulation … It is probable that the boundary between United States company law and securities regulation would have developed differently had there been no federal–state division. The fact remains that company law and securities regulation not only complement each other so that they are, at least in part, functionally interchangeable, but even in legal terms there is much common ground, similarity of concepts, and points of contact between them. This must also be taken into consideration when looking at comparative company law."

12 Kitch EW (2005) pp 36–37: "[S]ecurities regulation, which in its application to corporate issuers can be viewed as part of corporate law, and which is mandatory and not consensual in structure, is an area where the contractual approach is in dispute in the literature." Romano R (1998) argued that securities law should be dispositive.

13 Ostrom E (2005) p 210.

14 Kitch EW (2005) p 35: "Corporate law provides default rules that can be varied by the parties … The law has shifted from a concept of mandatory corporate norms to a concept of a set of organizational options."

15 See Mäntysaari P (2012) Chapter 5.

scope and contents of company law.[16] Moreover, it has failed to build on the analytic company law theory that has been developed in continental Europe since the nineteenth century after the adoption of general incorporation laws.[17] We will discuss continental European developments in this Chapter.

Alternatively, the contractarian theory could be described as a political programme intended to become self-fulfilling. Unlike the contractarian theory, the matrix theory of company law can describe the contents of company law. In the next section, we will have a look at the matrix theory.

2.3 The Matrix Theory of Company Law

2.3.1 General Remarks

To choose relevant issues for the study of the historical evolution of company law, we use the matrix theory of company law. The matrix theory of company law is in many ways the opposite of the contractarian theory.[18] What we call the matrix theory of company law is the result of two independent lines of comparative and holistic research.

The first line of research (Pistor – Keinan – Kleinheisterkamp – West, section 2.3.2) started with a study that showed that "corporate law" has a complex function and can be described as a matrix.[19] This study came to be cited in the legal origins and transplants discourse.[20]

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16 Neither does neoclassical economics. See even Kállay B (2012) p 41: "It can be seen from above that the standard neoclassical price theory is not really a theory of the firm, since it cannot answer to any of the big questions: 1. There is no cause of the existence of the firm, 2. It considers the boundaries of the firm to be given, 3. It considers the internal processes to be uninteresting, to be like a 'black box'."

17 See Bratton WW (1989) p 1508.

18 See Kitch EW (2005) p 38: "The emergence of a contractarian consensus in corporate law has simplified the field. At the same time, it has reduced the importance of the field, for the consensus of necessity concedes that public policy questions such as concentration of power, structure of the tax system, employer-employee relations, and organization of the securities markets are appropriate subjects for the law to address. The only claim of the contractarian consensus is that those subjects should be addressed in other fields of law, not as part of the law governing the internal structure of the firm. As a result, the field of corporate law has lost some of its importance."

19 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002).

20 It was cited as a critique to La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1998). Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) pp 792–793: "[D]atabases have been created that allow us to run regressions for over seventy countries. Yet, this type of analysis has not an-

The second line of research (Mäntysaari, section 2.3.3) started as a comparative study of corporate governance.[21] It was followed by a study of the interests of the firm in the context of corporate governance and corporate finance.[22] The interests of "the firm" meant here neither the interests of shareholders nor the interests of a legal entity. The firm was defined as an organisation and ideal type.[23] Focusing on how firms can reach their objectives with legal tools and practices in these contexts was intended to align theory with existing laws and more sustainable corporate practice.[24] The matrix theory of company law was a theory that combined a new legal theory of corporate governance, a new legal theory of corporate finance, the necessary existential questions, and the interests of the state.[25]

The two lines of research ended up with similar conclusions regardless of the fact that they neither shared their knowledge interests nor their methods. Differences in the conclusions were largely attributable to differences in functionality (focus on "corporate law" v. focus on any legal tools and practices that share the same function) and the choice of the most important users of corporate law (the state and shareholders v. the state and the firm).

The matrix theory of company law can help to explain why company law is a complex thing, why narrow legal or theory transplants can become legal or theory irritants[26] or hamper long-term development in transplant countries,[27] and why there are powerful forces contributing to path dependency.[28] A further driver

swered two fundamental questions, namely, what is good corporate law, and how does good law evolve?"

21 Mäntysaari P (2005).

22 Mäntysaari P (2010a).

23 Mäntysaari P (2012) section 4.2. The term "ideal type" was coined by Max Weber who also defined the firm (das Unternehmen) as an ideal type. Weber M (1922) Part 1, Chapter II, § 11. See also Weber M (1922) Part 1, Chapter I, § 12 on the notion of "Verband".

24 See also Hopt KJ (2019a) II.2(b): "The role of lawyers and legal counsel in comparative company law is traditionally underrated, since they do their work for their clients and enterprises on a day-to-day basis. Yet they are the real experts in both conflict of company laws and of foreign company laws."

25 Mäntysaari P (2012) Chapter 10.

26 Teubner G (1998) on legal irritants; Mäntysaari P (2017) pp 25–26; Fleischer H (2018d) p 704: "Jedes (Teil-)Rechtsgebiet ist nämlich um bestimmte Leitideen oder Schlüsselkonzepte herum organisiert, die seine Entwicklung über Jahrzehnte offen oder verdeckt beeinflussen und vorantreiben." For the reception or non-reception of Anglo-American theories in Germany, see Fiss PC, Zajac EJ (2004); André T Jr (1998); Kieser A (2004).

27 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2003) on the "transplant effect".

28 Lemercier C (2017) p 17 pointed out that "path dependency … is a lazy answer if we don't specify how it works".

of path dependency is the fact that the policy preferences of the state play a major role and change over time as societal circumstances change.[29]

2.3.2 The Matrix Theory of Pistor – Keinan – Kleinheisterkamp – West

Pistor and co-authors asked "two fundamental questions, namely, what is good corporate law, and how does good law evolve?"[30] They noted that "[t]he Schumpeterian process of creative destruction applies not only in economics, but also holds important lessons for the evolution of law".[31] Competition between firms acts as a driver of competition between legal systems and as a driver of regulatory competition in corporate law. Therefore, "continuous evolution of law is a key ingredient to 'good' law".[32]

They pointed out that "[t]he corporation has been a remarkably resilient legal institution for 200 years of industrialisation and modernisation largely because of its capacity to adapt constantly to a changing environment. Legal systems that have facilitated this process of adaptation and at the same time been able to respond to new legal lacunae created by change have proved to be more successful over time".[33] In other words, the corporation has survived, because the inherent flexibility of corporate law has made the corporation a useful tool.

Pistor and co-authors suggested that the function of corporate law involves "a tradeoff between agency problems and flexibility". Building on the popular agency theory,[34] the authors identified shareholders and creditors as principals and the corporation (its management) as the agent.[35] While it is open whether

29 See also Fanto JA (1998a) p 33: "If different corporate governance practices exist in corporations and countries throughout the world and firms successfully function in their markets despite these differences, then corporate governance must be subject to, although not entirely dictated by, cultural or situational influences. An understanding of corporate governance in any country should identify the cultural forces that, at a given time, push relationships between shareholders and managers in a particular direction. These forces include legal doctrines which influence shareholder/manager relationships, pressures from groups and individuals who have a stake in a particular governance solution or structure, and a country's traditions of firm ownership."

30 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) pp 792–793.

31 *Ibid.*, p 796.

32 *Ibid.*, pp 793–794.

33 *Ibid.*, pp 793–794.

34 Jensen MC, Meckling WH (1976).

35 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) p 796: "Early corporate laws had relatively effective solutions for the agency problem, including ultra vires doctrine, unanimous

they assumed that the corporation has its own interests worthy of protection, they at least seem to have assumed that there are interests attributable to the corporation, which does indeed reflect the wording of many company law norms.[36] Pistor and co-authors said that the corporation (its management) needs "the ability … to respond to a quickly changing environment" and "substantial flexibility" but "without creating a control vacuum".[37] Consequently, Pistor and co-authors argued that "striking the right balance between flexibility and control is the key ingredient for ensuring the adaptability of the corporate form to a constantly changing environment".[38]

Pistor and co-authors further developed legal indicators (a taxonomy of the core aspects of corporate law) to which positions on the flexibility-rigidity continuum can be attached. They distinguished between questions of:

- existence (formation, liquidation, term, merger);
- governance structure (board structure, the function of the board or boards, the appointment of board members, the dismissal of board members, the scope of management powers, the powers of the shareholders meeting, voting rules, majority requirements, the right to call the shareholders meeting); and
- corporate finance (capital increase, capital decrease, issuing of shares, the valuation of contributions in kind, repurchase of shares).[39]

The findings left Pistor and co-authors "skeptical of attempts to improve corporate law by transplanting a handful of indicators". They pointed out that their findings were "consistent with theories of path dependent legal evolution".[40]

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shareholder vote provisions, and creditors' rights to petition for the liquidation of the firm if minimum capital requirements were not met. Such legal provisions limit agency problems, but at the same time greatly restrict the ability of corporations to respond to a quickly changing environment. A corporate law that allows greater flexibility implies more misuse, and thus higher agency costs. The historical challenge of the corporate law has been to balance these two conflicting interests and develop complementary legal control mechanisms that afforded corporations (i. e. its management) with substantial flexibility without creating a control vacuum."

36 See, for example, § 93(1) AktG in Germany and section 170(1) of Companies Act 2006 in the UK: "The general duties specified in sections 171 to 177 are owed by a director of a company to the company."

37 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) p 796.

38 *Ibid.*, p 796.

39 *Ibid.*, p 804, Table 3. See also p 830, Table 5.

40 *Ibid.*, p 871. See also Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2003) on the "transplant effect".

2.3.3 The Matrix Theory of Mäntysaari

My matrix theory is slightly different since I focus on the firm and its needs rather than the legal entity. Like in continental European law, I distinguish between the firm, the legal entity, and shareholders (section 2.4.13). In my broader commercial law theory, the firm is a particular kind of organisation that exists as an ideal type (Weber).[41] Since it exists, it can have its own interests. If it does have its own interests, its most fundamental interest must be its own long-term survival in a competitive environment. Some firms survive and others do not in a process of constant adaptation. The acceptance of economic Darwinism and the goal of survival in competitive markets make it reasonable to take rational decisions on behalf of the firm and try to stay in the game.[42] Moreover, they make it possible to define the firm's general objectives in broader contexts and specific objectives in more specific contexts. The firm uses legal tools and practices to reach its objectives in different contexts[43] and adapts to regulation because it is in its own interests to do so.[44]

This matrix theory of company law is based on the choice of four sets of objectives. First, the firm has particular objectives in the broad context of corporate governance, that is, in the context in which it organises its governance. Second, the firm has particular objectives in the broad context of corporate finance, that is, in the context in which it takes funding, investment, and exit decisions. Third, there must be existential questions inherent in the use of a legal entity such as a limited-liability company. Fourth, company law is influenced by the political objectives of the state.[45] The firm needs to take them into account when managing regulatory compliance and risk.

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41 Weber M (1922)Part 1, Chapter II, § 11: "… Unternehmen [heißt] ein an Kapitalrechnung autonom orienterbares Handeln … Alle Einzelmaßnahmen rationaler Unternehmen werden durch Kalkulation am geschätzten Rentabilitätserfolg orientiert." See also Weber M (1922) Part 1, Chapter I, § 12 on the notion of "Verband".

42 According to Carse JP (1986), a finite game is played for the purpose of winning, an infinite game for the purpose of continuing the play.

43 Mäntysaari P (2012) and Mäntysaari P (2017) on commercial law theory, in particular on Management-based Commercial Law.

44 The perceived behaviour of firms influences regulation. Carruthers BG, Lamoreaux NR (2016) on regulatory races based on assumptions concerning the behaviour of firms.

45 See, for example, Maitland FW (1913) xxx: "Thus the 'Fiction Theory' leads us into what is known to our neigbours as 'the Concession theory.' The corporation is, and must be, the creature of the State. Into its nostrils the State must breathe the breath of a fictitious life, for otherwise it would be no animated body but individualistic dust." See even Edwards JR (2019) pp 9 – 10 and 126 – 127 on company law reforms in the UK.

This leads to the conclusion that "company law" consists of a matrix of four broad regulatory systems. Three of them consist of: (1) legal norms on corporate governance; (2) legal norms on transactions and corporate finance; and (3) legal norms on the incorporation, restructuring, and expiry of companies. Moreover, in addition to these three systems that have been identified by Pistor and co-authors and others as well,[46] company law consists of a fourth element. Company law contains (4) legal norms that reflect the public policy preferences of the state. While these kinds of definitions can be a matter of taste, these four groups seem to reflect issues addressed by actual norms regarded as company law norms in the company law discourse.

Obviously, the state must have preferences when it adopts company laws, regardless of whether those preferences are regarded as good or bad[47] and regardless of whether those laws lay down default rules or mandatory rules.[48] These preferences manifest themselves in design principles for company law studied in this Chapter.

We can illustrate state preferences with a few well-known examples. Generally, the state may prefer any requirements in the public interest. Germany wanted the Aktiengesetz of 1962 to contribute to a wide distribution of shareholdings.[49] In the US, the Securities and Exchange Act of 1934 allowed the SEC to

46 Compare Fleischer H (2007) p 506: "Innerhalb des Gesellschafts- und Kapitalmarktrechts sehe ich zwei Kerngebiete, die Corporate Governance als zukünftige Megathemen ablösen könnten: Corporate Finance und Corporate Insolvency." From a historical perspective, see Bratton WW (1989) p 1485 on how the American states enacted "general corporation laws" that included "provisions respecting corporate purposes, directors' powers, capital structure, dividends, amendments, and mergers" from the 1850s to the 1880s. Bratton cites Hurst JW (1970) p 82.

47 Armour J, Enriques L, Ezrachi A, Vella J (2018) p 304: "However, it would be naïve to think of business law production as an aseptic endeavour driven by benevolent social planners. Business law is the outcome of political struggles and negotiations, and businesses are key players in the policymaking process."

48 For a different view on company law, see Kitch EW (2005) p 36: "The critical moment was the introduction of general incorporation statutes that made the grant of the corporate charter automatic once the prescribed mechanical steps were taken. Once the state no longer seriously undertook the task of imposing customized restrictions on each corporation based on its particular situation, it became difficult to hold the view that such restrictions served important state policies."

49 Deutscher Bundestag, 4. Wahlperiode, Drucksache IV/171, 3 February 1962, p 93: "Nur bei einer diesen Grundsätzen entsprechenden Gestaltung des Aktienrechts werden private Eigentümer immer wieder bereit sein, ihr Kapital einer Aktiengesellschaft zur Verfügung zu stellen und so den Bestand und Fortschritt unserer auf der privaten Initiative beruhenden Wirtschaftsordnung zu gewährleisten. Damit wird zugleich der gesellschaftspolitischen Aufgabe, immer weitere Schichten und Kreise unseres Volkes an dem Produktionsvermögen der Wirtschaft zu be-

regulate financial markets as "necessary or appropriate in the public interest or for the protection of investors".[50] In 1996, Congress added wording to clarify what the SEC shall consider in its rule-making when it takes action in the public interest: "Whenever … Commission is engaged in rulemaking and is required to consider or determine whether an action is necessary or appropriate in the public interest, the Commission shall also consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation."[51] Depending on the country and the point in time, requirements in the public interest might alternatively range from corporate social responsibility (CSR) to gender equality on corporate boards. This is indeed the case in the EU.[52] In authoritarian countries, political or party influence at corporate level may play an important role.[53] We may regard actual state preferences as good or bad, but company law theory must accept that they exist.

A theory of company law must consist of three sectoral theories: (1) a theory of the law of corporate governance; (2) a theory of the law of corporate finance; and (3) a theory that describes the incorporation, restructuring, and expiry of companies. Moreover, the public policy preferences of the state are connected to (4) political power and the philosophy of commercial law or corporate law since policy preferences require choices between conflicting interests.[54] For example, the regulation of corporate governance is designed to achieve different political goals depending on whether it is designed to foster the managerial business model, the financial business model, or any other model.

We can have a look at my theory of corporate governance[55] that designates one of the sets of norms that are part of the matrix. There are countless other

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teiligen und einer Massierung des Kapitals in Händen weniger Personen entgegenzuwirken, wirksam gedient und eine für die Verwirklichung der Forderung breitester Streuung des Eigentums auf dem Gebiet des Aktienwesens entscheidende Voraussetzung geschaffen."

50 See, for example, Section 3(a)(27) of the Securities and Exchange Act of 1934, 15 U.S.C. 78(c)(a)(27).

51 In 1996, Congress added Section 2(b) to the Securities Act of 1933 and Section 23(a)(2) to the Securities and Exchange Act of 1934.

52 See, for example, Fleischer H (2018a); Fleischer H (2018d) pp 726 – 727; Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups; Sénard JD, Notat N (2018) p 4: "La France compte en Europe et au niveau mondial, parmi les pays pionniers de la responsabilité sociale et environnementale des entreprises (RSE)."

53 For Chinese corporate governance capitalism, see Milhaupt CJ (2017).

54 Heck P (1914).

55 See Mäntysaari P (2005) section 2.3; Mäntysaari P (2010a) Chapters 8 – 9; Mäntysaari P (2012) Chapters 7 – 10.

attempts to define corporate governance. It is customary to focus on relationships between a company's management, its board, its shareholders and other stakeholders.[56] Some scholars distinguish between internal and external corporate governance.[57] My particular theory of corporate governance theory defines the context of corporate governance in a new way and identifies the particular issues that are addressed by firms in this newly-defined context. Since the theory is broader than mainstream corporate governance theories, the issues are more general.[58]

According to this corporate governance theory, there are issues that must be addressed one way or another because of the existence of two things,[59] namely a legal entity (or a sufficiently self-contained organisation) and an organisation (customarily consisting of people, a hierarchy, and separation of work).[60] When addressing these issues, we must decide in whose interests they will be addressed. Moreover, we need particular design principles for addressing these issues in the light of the chosen interests.

Corporate governance norms thus address issues raised by:

- the separate legal personality of companies (these issues include asset partitioning, the power to represent the entity, how the representatives of the entity must act, how other parties must act, and proper incentives);[61]

56 Basel Committee on Banking Supervision (2015) Glossary, p 1: "A set of relationships between a company's management, its board, its shareholders and other stakeholders which provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance. It helps define the way authority and responsibility are allocated and how corporate decisions are made." The Basel Committee refers to the glossary of corporate governance-related terms in OECD's 2003 Experiences from the Regional Corporate Governance Roundtables.

57 For a short summary, see Hopt KJ (2021) p 14.

58 For mainstream issues, see Basel Committee on Banking Supervision (2015) setting out thirteen major principles in respect of corporate governance in banks.

59 See, for example, Angell JK, Ames S (1832) p 1: "A corporation, as it is generally understood, is an intellectual body, created by law, composed of individuals united under common name, so that the body continues the same, notwithstanding the change of the individuals who compose it, and which for certain purposes is considered a natural person." Cited in Arner D (2002) p 52.

60 The fact that this seems to connect very well with the words "corporate" and "governance" is purely accidental. The same principles can often be applied to entities that are not corporations, for example to states or municipalities. See Kuhn AK (1912) pp 18 – 21: "It is not surprising to find a well developed corporate theory of the town in the Republican period, for the aggregate group-form was typical even of the primitive community."

61 The questions are in other words: To whom do assets linked to the company belong? Who is to be regarded as acting as or on behalf of the company? How should the persons acting as or on behalf of the company act? How should the various stakeholders act? How are these persons and

- the organisation of firms (these issues include the allocation of power, risk, and information);[62] and
- the fact that there can be differences between the firm's real organisation and its legal organisation (these issues typically include the regulation of groups).

Moreover, corporate governance norms must define the interests to be served. Corporate governance norms:
- designate the interests to be served (such as the relevant principal when one applies the agency theory) and
- define those interests (such as the legally relevant interests of the principal).[63]

According to my corporate governance theory, the most important principal of the principal-agent theory is the firm itself. Its most fundamental objective is its own long-term survival in a competitive marketplace.[64] The choice of the firm as the principal thus replaces the mainstream view of shareholders as the principal.[65]

The two major design principles for addressing the relevant issues are:
- ensuring that the governance model is self-enforcing (meaning that the model should work with minimal resort to legal authority, work with minimal resort to external monitoring inputs, reduce internal agency problems, enable the effective coordination of activities, and be sustainable);[66] and
- ensuring that the governance model can facilitate innovation.[67]

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stakeholders motivated? Mäntysaari P (2012) section 7.2. For asset partitioning in the management of investment funds, see Morley J (2014) pp 1243–1244. For a recent critique of the vague notions of US corporate governance discourse, see Ciepley D (2019).

62 The questions are in other words: How is power allocated? How is risk allocated? How is information produced, distributed and disclosed? Mäntysaari P (2012) section 7.2.

63 See *ibid.*, sections 7.3 and 7.4; Mäntysaari P (2010a) Chapters 8–9.

64 Mäntysaari P (2010a) section 8.2.6 pp 172–173; Mäntysaari P (2012) section 6.3.6 pp 90–91. See already Rathenau W (1917b) p 144 on the firm: "Dieses Wesen führt eigene Rechnung, arbeitet, wächst, schließt Verträge und Bündnisse, nährt sich von eigenem Erträge, lebt als Selbstzweck." For an example of the corporate purpose in the 2020 crisis, see Tom Braithwaite, Corporate survival is the metric that matters. Financial Times, 20 March 2020.

65 It is not just a criticism of shareholder primacy. Compare Stout LA (2012) rejecting shareholder primacy and Macey JR (2013) rejecting Stout's views.

66 Mäntysaari P (2012) section 8.2. Shareholders are here regarded as external monitors. See also Ciepley D (2019): "… stockholders seem very much to be 'outsiders,'' not 'insiders' …"

67 Mäntysaari P (2012) Chapter 9; Belloc F (2012); Gonzales-Bustos JB, Hernández-Lara AB (2016); Asensio-López D, Cabeza-García L, González-Álvarez N (2019).

While Pistor and co-authors argued that "striking the right balance between flexibility and control is the key ingredient for ensuring the adaptability of the corporate form to a constantly changing environment",[68] my corporate governance theory focuses on the self-enforcement of the governance model (that includes not only control but addressing all relevant issues that must be addressed one way or another in this context) and facilitating the capability of the organisation to innovate (that includes not only the adaptability of the corporate form but even means the adaptability of the firm's organisation and business). For example, applying and balancing these two design principles can help firms to grow bigger even though large size customarily makes it more difficult for the firm to adapt.[69]

When we recognise the existence and interests of the firm, it becomes easier to understand the function of the board and shareholders as agents of the firm. While shareholders may sometimes be suppliers of capital to the firm, they are always providers of what we call ancillary services (section 3.1).[70] The question of "ownership" is here irrelevant.[71] To the firm, the costs and benefits of having shareholders can depend on the quality of shareholders, the share ownership structure, the funding structure, commercial needs, and other things.[72] The firm should treat shareholders as real shareholders having a function, not as fictive shareholders that under neoclassical economic theory have no particular function. From the perspective of the firm, distributions to shareholders should depend on the nature and quality of shareholders' services.

68 Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) p 796.

69 Williamson OE (2002a).

70 Mäntysaari P (2010a) section 8.7; Mäntysaari P (2012) section 7.9. In the venture capital context, such ancillary services have been called "non-cash contributions" or "non-capital contributions". Gilson RJ (2003). See also Hansmann H (1988) pp 267–268 and Macey JR, O'Hara M (2005) p 572 on Hansmann: "What is particularly important in determining which firms will be owned by customers or workers, and which will be owned by outside investors is homogeneity of jobs and skills: labor cooperatives appear to work best where all the workers who are also members of the cooperative perform essentially identical tasks within the firm. For example, Hansmann observes that in law firms, partners have similar skills and perform similar tasks, and that 'there is relatively little vertical division of labor or hierarchy among the partners in the firm.'"

71 The assets of a separate legal person are owned by the legal person. A separate legal person is not "owned" by anybody. A separate legal person may issue securities to stakeholders such as as lenders or shareholders. Compare Hansmann H (1988) p 269.

72 Compare Hansmann H (1988) p 275. Hansmann studies costs incurred by "owners" or "patrons" but does not take into account costs incurred by the firm. Such costs are invisible in shareholder primacy.

The opposites of this approach include, first, shareholder primacy that is based on the contractarian theory and neoclassical economic theory and, second, the notion of a legal entity such as the limited-liability company having a general "social purpose" or a "corporate purpose".[73] According to my theory, the legal entity is just a tool with no purpose of its own.

2.3.4 Conclusion

The contractarian theory of company law is not really a theory of company law as it says little about the scope and contents of company law. The matrix theory of company law describes company law better.

In the light of the matrix theory of company law, the evolution of company law cannot be linear over time and across jurisdictions. Company law is much too complex for that. To understand the evolution of company law, it is necessary to focus on the core functional issues. We will have a look at many functional issues in section 2.4. Moreover, company law is always influenced by the public policy preferences of the state.

2.4 The History of Company Law

2.4.1 General Remarks

Company law (or corporate law) has long roots.[74] There can be alternative ways to describe the history of company law. The first is to completely ignore the gradual development of company law and assume that the perceived state of company law at a particular point in time reflects the nature of company law, perhaps as natural law.[75] Second, one could start with a present notion of company law and trace its historical roots.[76] When doing so, one might assume that the

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73 See, for example, Hsieh NH, Meyer M, Rodin D, van't Klooster J (2018).

74 See, for example, Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002); Jacobs JB (2015).

75 According to Kraakman and co-authors, a principal function of corporate law is to provide business enterprises with a legal form that possesses five core attributes: legal personality, limited liability, transferable shares, delegated management under a board structure, and investor ownership. Kraakman R, Armour J, Davies P, Enriques L, Hansmann H, Hertig G, Hopt K, Kanda H, Rock E (2009).

76 For example, Malmendier U (2005) pp 31–32: "Three features of the corporation are of note. First, its existence is not affected by the departure of individual members ... Second, designated

present state of company law, whatever it may be, is inevitable due to divine inspiration, natural law, or functionality.[77] Third, one could study the gradual development of the discourse that we now call company law.[78] In this section, however, we will study the gradual development of an area customarily regarded as company law through a framework that we call the matrix theory of company law.

In the light of the matrix theory of company law, it would be futile to try to describe the international evolution of company law as a straight line with steps along a timeline.[79] It is nevertheless possible to study the evolution of policy preferences, existential rules, corporate governance rules, and corporate finance rules.[80] In this section, we will focus on policy preferences that are most closely connected to the purposes of this book. The earlier parts of this section discuss older developments. The later parts of this section discuss more contemporary developments. This reflects the increasing complexity of company law over time. The choice is partly subjective, partly a result of abduction, but hopefully legitimated by the outcome.[81]

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members of the company can represent it, in other words, they can enter contracts without assuming rights or duties themselves … Third, the provision of financial capital does not entail managerial involvement and investor involvement is limited … Historians and economists have long asked when and under what circumstances such a refined institution first arose."

77 Blackstone assumed that English common law had a divine origin and was objectively valid as universal law. For functionality, see, for example, Lipton P (2018) footnote 22: "Functionalist approaches have been described as 'teleological'. Developments are due to the purpose they fulfil so that the way the law has developed to its present state is shaped by its functionality. It is implicit in a teleological view that the current position tends to be the most functional, as less functional alternatives have been discarded by the forces of history, which act as if by some design …"

78 Foucault M (1972).

79 See also Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) p 871: "These findings leave us skeptical of attempts to improve corporate law by transplanting a handful of indicators. Moreover, they are consistent with theories of path dependent legal evolution, but less so with claims of convergence of corporate law."

80 Fleischer H (2018d) p 704: "Jedes (Teil-)Rechtsgebiet ist nämlich um bestimmte Leitideen oder Schlüsselkonzepte herum organisiert, die seine Entwicklung über Jahrzehnte offen oder verdeckt beeinflussen und vorantreiben."

81 Mäntysaari P (2017) section 3.4.7. For a related approach, see Fleischer H (2018d) p 705: "Wer sich anschickt, die Trajektorien von Unternehmensinteresse und intérêt social während des letzten Jahrhunderts nachzuzeichnen, läuft Gefahr, sich in einem riesigen Ereignis- und Erzählraum zu verlieren. Eine vergleichende dogmengeschichtliche Studie muss daher raffen und vereinfachen. Dies geschieht hier durch eine Reduzierung auf zehn Haltepunkte, an denen man wie auf einer historischen Besichtigungsreise aus- und wieder einsteigen kann. Die Auswahl der einzelnen Stationen und Wendepunkte trägt unweigerlich subjektive Züge; auch für dogmengeschicht-

We will start with the emergence of policy preferences and design principles in general (section 2.4.2). Design principles became more important after the concession system was replaced by the normative system. The central design principles that emerged under the normative system included: the limited liability of all shareholders (section 2.4.3); the self-governance of the firm (section 2.4.4), the separation of functions (section 2.4.5); auditing requirements (section 2.4.6); the public disclosure of information (section 2.4.7); accounting standards (section 2.4.8); the use of different limited-liability company forms (section 2.4.9); the use of boards (section 2.4.10); and dealing with conflicts of interest and dead-lock situations (section 2.4.11).

The number of design principles grew with the increasing complexity of business organisations and company law. In particular, it became necessary to address questions of values and conflicting interests. The choice of design principles depends not only on the interests of the state but even on economic forces. Economic forces have in practice meant the choice of a managerial business model or a financial business model as the narrative of company law (section 2.4.12). In the technical sense, much of company law discourse has focused on what can be perceived as the interests of the company (section 2.4.13). The definition of the interests of the company became the focal point for the conflict between company law and neoclassical economic theory. Moreover, the notion of the interests of the company has a connection to the regulation of holding companies and company groups (section 2.4.14).

Due to powerful economic interests and incentives, company law discourse has been an example of regulatory capture with 1976 regarded as the watershed year when the financial business model took over as the narrative of American company law. In the long term, however, firms that adapt to competition are more likely to survive than firms that do not adapt. This makes fostering innovation an important design principle (section 2.4.15). It has re-emerged in start-up practice, in the technology sector, and in digital economy.

In any case, there should be a key design principle for company law. Company law cannot work as a coherent system without a key design principle (section 2.4.16).

One can say that continental European company law and English company law have followed different paths since the eighteenth century. English company law has its roots in the practices of shipping in which investors agreed on their mutual relationships. Continental European company laws reflect the growth of

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liche Längsschnittstudien im Gesellschaftsrecht gilt das Diktum vom Konstruktionscharakter der Geschichte."

manufacturing and banking and were designed to facilitate specialised management and monitoring. The fundamental principles of US company law have been imported from English common law.

The most important steps on the path of the development of limited-liability company law were the codification of limited liability in the French Code de commerce of 1807 (with the limited-liability company as a particular kind of limited partnership with all partners as limited partners), the introduction of free incorporation by the English Companies Act 1862 (replacing the concession system with the normative system), and the separation of management, monitoring, and share ownership in the German ADHGB of 1870 and 1884 (facilitating the growth of manufacturing companies, banks, and insurance companies). One can regard 1884 as the birth year of the modern limited-liability company.

2.4.2 The Emergence of Policy Preferences, Legal Practices and Design Principles

Company law generally reflects the policy preferences of the state. The evolution of company law is full of changes influenced by economic forces, the distribution of political power, and the prevailing policy preferences (sections 2.4.12 and 2.4.13).[82]

Historically, it is customary to distinguish between the octroi system, the concession system, and the normative system.[83] However, company law started much earlier as the practices of traders. Policy preferences developed as state interests grew. Policy preferences were and still are implemented by using various kinds of regulatory practices and design principles.

The practices of traders. Commercial law generally started as the practices of traders. Much of company law has its roots in such practices. Trade gradually

82 See, for example, Jacobs JB (2015) p 141: "I suggest that the evolution in corporate law is better described as a series of practical resolutions of institutional conflicts that, over time, were influenced and developed by converging economic forces and events." Bratton WW (1989) pp 1472–1473: "… a long series of attempts to describe and justify the phenomenon of collective production in individualist terms. Such theories have followed from and responded to economic practice …" Jacobs JB (2015) pp 141–142: "[I]nstitutional investors now constitute the stockholder base of U.S. public corporations. That development … has led to an increase in shareholder power relative to that of boards of directors, and a challenge to the vitality of the board-centric model on which corporate law has traditionally rested."

83 Lehmann K (1895) § p 82: "In der Geschichte des Aktienrechts werden gewöhnlich drei Perioden geschieden, die Periode des Octroisystems, die des Concessions- und die des Normativsystems."

contributed to the accumulation of wealth. After the accumulation of wealth in the hands of merchants and bankers, there was demand for investment opportunities. The practices of traders made it possible for wealthy individuals to invest in multiple business ventures.[84]

There are many famous examples of the existence of such ancient or recent practices. They include the societas publicanorum, the Dutch East India Company (VOC), the whaling syndicates of New Bedford, venture capital, the one-man company, and Standard Oil.

The societas publicanorum was a company of contractors with the Roman government. Such a business organisation was established as societas, that is, as a contractual union of a group of people to promote a common purpose.[85]

The development of company law was influenced by the practices of shipping and "distant trade".[86] The 1602 charter of Verenigde Nederlandsche Geoctroyeerde Oostindische Compagnie[87] (VOC, the Dutch East India Company) built on the prior practices of Dutch mariners in organising their long-distance voyages. One of the practices was to limit the liability of investors to the value of the ship and freight. The VOC served as a model for virtually all continental European maritime companies.[88] In 1609, the directors of the VOC declared the capital to be non-refundable.[89] Investors could nevertheless exit the company by selling their shares. The fact that the company was an entity independent of investors meant that the company "would not have to be dissolved upon the death or departure of one of its partners, and made it much easier to attract capital from a larger number of investors, many of whom would take only passive roles."[90] The VOC played a major role in the history of company law and in the evolution of the modern stock market.[91]

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84 See Arner D (2002) p 27.

85 Smith BM (2003) p 16 citing Adam Smith; Kuhn AK (1912) pp 22–24; Malmendier U (2005); Fleischer H, Cools S (2019) pp 467–468.

86 See Goldschmidt L (1891) pp 270–271 and 254: "Die Aktiengesellschaft endlich wurzelt in dem öffentlichen Anleihe- und Kolonialwesen." Lehmann K (1895) § 3 and § 2 p 28: "Nicht an die Gewerkschaft, sondern an die Rhederei knüpft die moderne Aktiengesellschaft an." Kuhn AK (1912) pp 32–34.

87 Spelling from Neal L (2005) p 165.

88 Kuhn AK (1912) pp 39–40. For the charter of the Danish East-Indian Company, see Lehmann K (1895).

89 Neal L (2005) p 167.

90 Smith BM (2003) p 16 referring to Adam Smith.

91 The classic work is de la Vega J (1688). See also Fleckner AM, Hopt KJ (2013) p 525; Smith BM (2003) p 16.

The practices of the whalers of New Bedford provide an example of the evolution of maritime practices in another direction. In the nineteenth century, New Bedford whalers developed a successful business model to pursue a common purpose.[92] Under this model, all contributors – the coordinating agents, investors, and the crew – were committed for the duration of the whole voyage. Their financial rewards depended on the success of the voyage. Profits were shared. After investors had received their share of the profits, the rest was divided among the crew according to a lay system. Since investors' stakes were rarely traded, whaling firms invested in multiple expeditions at the same time to reduce risk.[93]

Modern venture capital partly builds on such very old practices. Venture capital is an alternative way to organise business projects.[94] From the investor perspective, venture capital is channelled through funds that help to pool investor interest and diversify risk. From the perspective of the target firm, venture capital provides access to equity capital and ancillary services. The inputs of the entrepreneur and the fund are locked in the project for a minimum number of years.[95] One of the most important issues in venture capital is the timing and form of exit.[96] – Modern venture capital practices are closely connected to the rise of Silicon Valley as a technology hub. The emergence of independent venture capital firms was inspired by the success of Fairchild Semiconductor, the first venture-backed startup.

The evolution of one-man companies reflects the fact that companies have been used as legal tools by entrepreneurs and firms and shows how practices can be codified into law. Early laws on limited-liability companies customarily required many founders. However, this requirement could easily be circumvented by using dummies as was the case in the famous English case *Salomon v Salomon*.[97] The one-man corporation was later accepted in many jurisdictions.[98]

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92 See Melville H (1851) Chapter 16; Nicholas T, Akins JP (2012).

93 The Economist, Fin-tech. The first venture capitalists. Before there were tech startups, there was whaling, 30 December 2015; Hilt E (2006); Hilt E (2007); Hilt E (2008).

94 See Sahlman WA (1990) p 474; Broughman BJ, Fried JM (2013) p 1321.

95 See Morley J (2014) pp 1235–1236 on funds that do not allow shareholders to redeem their shares.

96 Gao X, Ritter JR, Zhu Z (2013); Broughman BJ, Fried JM (2013) p 1322.

97 Salomon v A Salomon & Co Ltd [1896] UKHL 1, [1897] AC 22.

98 For example, it was accepted in the US Model Business Corporation Act of 1962 and in the German GmbH reform of 1980. See Fleischer H (2018c) pp 255–257.

Standard Oil is a more complex example of the same phenomenon of using legal entities as tools. Standard Oil shows how the firm may use different business forms in the course of its development when adapting to growth and external circumstances.[99] In 1862, Samuel Andrews started an oil refinery in Cleveland. The business became Rockefeller & Andrews, a partnership, in 1865. In 1870, the highly capital-intensive business was incorporated as The Standard Oil Company, a joint stock corporation. Oil was a cutthroat business at the time. To create economies of scale, oil companies formed horizontal and vertical interlocking partnerships that were contract-based. Cartels were replaced by consolidation. In the "Cleveland massacre", Standard Oil obtained control of 26 refinieries in Cleveland. The existence of many legal entities caused problems with company charters (*Dartmouth College* and section 2.4.10)[100] and a problem with centralised management in the interests of the whole group (section 2.4.14). To address these problems, Standard Oil used a trust construction. The first trust agreement of 1879 was replaced by the famous Trust Agreement of 1882 developed by Samuel C.T. Dodd. There was no holding company. In the words of Dodd, the basic principle was that "stockholders surrender their stock certificates in the hands of trustees and take certificates from the trustees showing the amount of interest thus surrendered". After the trust had been declared illegal in company law and contract law, it was replaced by a holding company construction with Standard Oil of New Jersey as the new holding company in 1899.

The interests of the state, the octroi system. Moving on from the practices of traders, state interests led to the incorporation of companies. There would be no incorporation of companies without the state: "Private corporations are indisputably the creatures of public policy."[101]

The policy preferences of the state emerged and developed over a long period of time but in this case not yet in Rome. The incorporation of companies did not emerge in Roman law. Roman law did not recognise freedom of association.[102] Companies were incorporated much later and first under the octroi system.

99 See Fleischer H, Horn K (2019). For the continuing relevance of the history of Standard Oil, see Lamoreaux NR (2019).

100 Dartmouth College v. Woodward, 17 U.S. (4 Wheat.) 518 (1819).

101 Angell JK, Ames S (1846) Chapter I § 1 pp 27–29.

102 See Kuhn AK (1912) pp 24–25 and 28: "The law of Rome, both in the late Republican period and in the empire, recognized no freedom of association and was opposed to all societies on principle. Authorized private societies were compared to the corporations of public law – ad exemplum reipublicae – and permitted to hold property like municipal communities … [G]roup

Under the octroi system, limited-liability companies were legal monopolies created under charter or patent to foster the interests of the state.[103] For example, the charter of the Dutch East India Company (VOC) was adopted by the state, and the founding of VOC was connected to financing the Eighty Years War against Spain.[104] The history of VOC and similar companies shows that there was a connection between state interests, the founding of limited-liability companies, colonisation, and colonialism.[105]

The colonial companies had a close connection to the state. In the seventeenth century, French commercial law entered an interventionist path. The Ordonnance de commerce of 1673, also known as "le code Savary", was an early codification of medieval commercial law.[106] Title III of the Ordonnance dealt with books and registers, and Title IV with companies.[107] These companies were intended for small entrepreneurs.[108]

Because state interests were characteristic of early limited-liability companies, many well-known speculative and fraudulent ventures were state-backed.

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forms, as the subjects of legal rights and the objects of legal obligations, had their origin in the functioning of governmental authority in early communities."

103 See, for example, von Gierke O (1868) § 69.VII.A.2; Lehmann K (1895) § 7; Ducouloux-Favard C (1992) p 851 (le systeme de l'octroi).

104 Neal L (2005) p 165. The Bank of Saint George, the oldest chartered bank in Europe and of the world, was founded in 1407 to consolidate the public debt of the Republic of Genoa. See also Arner D (2002) pp 26 – 27: "Angell and Ames suggested the early division of these economic companies was into two classes: (1) regulated companies and (2) joint stock companies. Regulated companies were essentially state chartered monopolies for the pursuit of some interest beneficial to the state (such as foreign trade) … Joint stock companies … more closely resembled the modern form of business corporation, in that they are 'composed of persons who seldom know any thing of the business of the company, but who leave the management of it entirely to a body of directors, and are contented with receiving such dividends as the directors think proper to make.' …" According to Arner, "Angell and Ames may have taken this division from Adam Smith who used the same general divisions in his own classifications".

105 Ducouloux-Favard C (1992) p 850; Szramkiewicz R, Descamps O (2013) nr. 282 on French companies: "L'objet de ces compagnies est double: c'est un but purement commercial, mais c'est aussi un but de colonisation."

106 Monéger J (2004) p 178.

107 Ordonnance de 1673, Titre IV, Article 1: "Toute société générale ou en commendite, sera rédigee par écrit ou pardevant Notaires, ou sous signature privée; & ne sera recue aucune prevue par témoins, contre & outre le contenu en l'acte de société, ni fur ce qui feroit allégue avoid efté dit avant, lors ou depuis l'acte, encore qu'il s'agit d'une fomme ou valeur moindre de cent livres."

108 Szramkiewicz R, Descamps O (2013) nr. 398: "… l'Ordonnance de Colbert est faite pour le petit et le moyen commerçant."

Such ventures included, for example, the Mississippi Company in France and the South Sea Company in England.[109]

After such spectacular scandals, the founding of limited-liability companies was regarded as a threat.[110] In England, the Bubble Act of 1720 prohibited the creation of joint stock companies without royal charter. The prohibition of unauthorised joint stock ventures in England was not repealed until 1825.[111] Between 1760 and 1850, "Britain underwent its Industrial Revolution without mobilizing shareholder capital on a large scale". In practice, businessmen could circumvent the Bubble Act and use functional equivalents where the benefits of incorporation were required.[112]

Companies nevertheless served a purpose for the state[113] and continued to do so even after the octroi system was replaced by the concession system.[114]

Codification, industrial policy, the concession system. The introduction of the concession system was connected to industrialisation. Industrialisation and technological advancement increased both the minimum efficient scale of firms[115] and economic competition between states. Competition encouraged states to codify company law practices[116] and to adopt general incorporation acts.[117] The first general incorporation acts were based on the concession system.[118]

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109 Gerding EF (2013) pp 68–72; Loss L, Seligman J, Paredes T (2011) Volume I, Chapter I pp 1–11.

110 For the history of limited-liability companies generally, see von Gierke O (1868) § 69.

111 Meisel N (2004) p 40 note 3.

112 Edwards JR (2019) pp 23–24.

113 See Arner D (2002) p 46 citing Handlin O, Handlin MF (1945) p 22.

114 For Germany, see Fleischer H (2018a) p 5: "Hierzulande reichen die Traditionslinien des aktienrechtlichen Gemeinwohlpostulats zurück bis zum Octroi-System des Preußischen Allgemeinen Landrechts (ALR) von 1794, nach dem rechtsfähige Korporationen eines speziellen hoheitlichen Anerkennungsaktes bedurften. § 25 II 6 ALR verlangte für die Verleihung von Korporationsrechten die Verfolgung eines fortdauernden gemeinnützigen Zwecks. Diese normative Gemeinwohlverpflichtung war zwar unter dem Konzessionssystem im preußischen Gesetz über Aktiengesellschaften von 1843 und im ADHGB von 1861 nicht mehr ausdrücklich vorgesehen, wirkte aber in der Möglichkeit zum Konzessionsentzug aus Gründen des Gemeinwohls noch eine Weile fort. Als gemeinnützig galt eine Zweckverfolgung regelmäßig dann, wenn sie in einem "allgemeinen staatswirtschaftlichen Interesse" wurzelte."

115 Fanto JA (1998a) p 37; Chandler AD (1990) p 21.

116 Rochat J (2018): "[T]he société anonyme (SA) had appeared for the first time in … the code de commerce … This legal innovation was itself only a formality: in practice it gave a name to, and regulated, older commercial practices dating back to the chartered companies of the seventeenth century."

117 See, for example, Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) pp 798–799.

In France, Napoleon's 1807 Code de commerce permitted the existence of limited-liability companies (société anonyme, SA) in addition to partnerships (société en nom collectif) and limited partnerships (société en commandite).[119] The société anonyme has been described as just a new form of chartered company[120] or merely as a species of limited partnership.[121] The fundamental feature that distinguished the société anonyme from the other two company forms was the limited liability enjoyed not just by limited partners but by all partners.[122] The wording of the 1807 Code shows that the roots of the société anonyme lie in earlier contract practices: "Le contrat de société se régie par le droit civil, par les lois particulières au commerce, et par les conventions des parties."[123]

While the Code de commerce allowed companies to be formed according to general company law rules, the founding of companies was still subject to state authorisation.[124] After the end of the Napoleonic era, the state further ruled in 1825 that to qualify for the status of société anonyme a company must pursue a public purpose.[125] The use of the société anonyme was only perceived as legit-

118 Ducouloux-Favard C (1992) p 853 (le système de al concession, Konzessionssystem).
119 Article 19 of the Code de commerce (1807): "La loi reconnait trois espèces de sociétés commerciales: – la société en nom collectif; – la société en commandite; – la société anonyme."
120 Rochat J (2018): "The SA, as it existed in the early nineteenth century, was nothing more than a new form of chartered company, a form that was notably used in transoceanic trade (in the seventeenth century) and, later, for printing money."
121 Kuhn AK (1912) p 56.
122 *Ibid.*, p 56; Renaud A (1875) § 1 p 1 and § 5 pp 69–70; Rochat J (2018): "The drafters of the Code themselves admitted that they drew most of their material from the Colbert Orders of 1673–1681, and the only novelty was what was said about bankruptcy (Commercial Code Project, presented by the Committee appointed by the Government on 13 Germinal year IX, 1801, pp. vii–xxxvii)." For English law, see section 6 of the Companies Act, 1862: "Any seven or more persons associated for any lawful purpose may, by subscribing their names to a memorandum of association, and otherwise complying with the requisitions of this act in respect of registration, form an incorporated company, with or without limited liability." For companies limited by shares and companies limited by guarantee, see sections 7–9 of the Act. For unlimited companies, see section 10 of the Act.
123 Article 18 of the Code de commerce (1807).
124 Article 37 of the Code de commerce (1807): "La société anonyme ne peut exister qu'avec l'autorisation du roi, et avec son approbation pour l'acte qui la constitue: cette approbation doit être donnée dans la forme prescrite pour les régimes d'administration publique." Article 40 of the Code de commerce (1807): "Les sociétés anonymes ne peuvent être formées que par des actes publics."
125 Robé JP (1999) p 55; Meisel N (2004) p 22.

imate insofar as the company contributed to the public interest.[126] During this period, the société anonyme "was never more than marginal", but "little by little, new uses and understandings of the société anonyme would be invented that were to provide a legal foundation for large-scale capitalism, notably in the guise of railways and joint-stock banks".[127]

Early US company law followed English law up to approximately 1776. [128] Much of early US company law is thus derived from English sources. Both corporate practice and legislation nevertheless started to develop at a faster rate in the US.[129] In 1811, the state of New York adopted the "Act Relative to Incorporations for Manufacturing Purposes" as the earliest attempt in the US to bring about general incorporation. As its name implies, the New York act had a limited scope.[130] The concession system continued until 1837, when Connecticut passed the first general act of incorporation for business companies. By 1850, about twenty American states had passed general incorporation statutes. They were modelled on the Connecticut act.[131] Competition for incorporations and tax revenue made American states adopt liberal incorporation laws.[132] According to Chandler, the core company law framework was in place by the 1890s: "After the 1890s, administrative innovations were much more important to the development of American business than legal ones".[133] By the beginning of the 1920s, US company law had been transformed by the competition for corporate charters.[134]

As late as 1840, there were no middle managers in the US.[135] Before 1850, US industrial corporations customarily were small family firms.[136] The partnership

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126 Rochat J (2018) on France: "The practices that were observed, whether they related to regulation or how such companies were used, were unlike current commercial practices and suggest that the SA was reserved for very specific purposes. These purposes shared a principal characteristic: its use was only perceived as legitimate insofar as the company contributed to the public interest. This suggests a legitimation system that itself was strangely reminiscent of the political economy of privileges under the Ancien Régime." Fleischer H (2018a) p 5 on Germany. See also Sénard JD, Notat N (2018) pp 6–7: "La notion de raison d'être constitue en fait un retour de l'objet social au sens premier du terme, celui des débuts de la société anonyme, quand cet objet était d'intérêt public. De même qu'elle est dotée d'une volonté propre et d'un intérêt propre distinct de celui de ses associés, l'entreprise a une raison d'être."

127 Rochat J (2018).

128 Arner D (2002) p 43.

129 See Bratton WW (1989) p 1485; Arner D (2002) pp 24 and 44.

130 See Kessler WC (1940); Robé (1999) pp 56–57.

131 Kuhn AK (1912) p 99.

132 *Ibid.*, p 100.

133 Chandler AD (1962) p 31.

134 Wells H (2009) p 585.

135 Chandler AD (1977) p 3.

remained the standard legal form of the commercial enterprise.[137] This said, the number of corporations was many times higher than in France in the mid-nineteenth century.[138] In the 1870s, nearly all American industrial enterprises just manufactured.[139] There was more room for horizontal and vertical growth after the basic railroad network was completed in the 1880s.[140]

Once the opportunity for nationwide operations appeared, New Jersey amended its general incorporation law in 1889 to permit one corporation (incorporated in one state) to purchase stock of another (incorporated in another state). The New Jersey provisions for the general incorporation of holding companies were soon copied by other states.[141]

Continental Europe followed France in the development of company law. The French Code de commerce served as a model for continental European company laws.[142] During the empire of Napoleon, it was applied in the German states that belonged to the Confederation of the Rhine (Rheinbund, États confédérés du Rhin or Confédération du Rhin). In these states, the société anonyme could be incorporated under the Code de commerce (1807) and, after the collapse of Napoleon's empire, under the Commercial Code of the Rhine (das Rheinische Handelsgesetzbuch, 1815). This proved important for the development of German and European company law and commercial law in general.[143]

In the UK, "the first half of the nineteenth century saw ... economic policy previously based on mercantilist philosophy superseded by a commercial strat-

136 Chandler AD (1962) p 19.
137 Chandler AD (1977) p 36.
138 Lamoreaux NR, Rosenthal JL (2005) p 32.
139 Chandler AD (1962) p 24.
140 Chandler AD (1962) p 29; Chandler AD (1977) pp 79–81.
141 Chandler AD (1962) pp 30–31; Dettling HU (1997) p 18; Wells H (2009) pp 583–585.
142 von Gierke O (1868) § 69.A.4 p 997; Ducouloux-Favard C (1992) p 854; Schnorr T (2000) p 9; Fleischer H, Cools S (2019) pp 476–477; Lehmann K (1895) § 1: "Die heutige Aktiengesellschaft als von der Gesetzgebung geordnetes Rechtsinstitut stammt aus dem Code de Commerce." US company law played no major role. See von Hein J (2008) p 90 on the German company law reform of 1870: "Man könnte ferner annehmen, das Recht in den USA habe aus Sicht der Entwurfsverfasser über kein hinreichendes Prestige verfügt, um als Quelle für Rezeptionen in Betracht zu kommen. Tatsächlich lässt sich im Deutschland des 19. Jahrhunderts ein verbreitetes antiamerikanisches Ressentiment nachweisen." Moreover, since the US lacked a federal company law codification, it was not regarded as a good model for the codification of company law. See von Hein J (2008) p 91.
143 Kuhn AK (1912) p 65; Raiser T (1983) § 2.1: "Die erste gesetzliche Regelung ... findet sich im französischen Code de Commerce von 1807, der auch in den zum Rheibund gehörenden westdeutschen Staaten galt."

egy designed to promote unfettered freedom of trade".[144] Like in many other European countries, French law was used as a model in England.[145] The repeal of the Bubble Act in 1825 "restored the common law position which no one really understood".[146] There was "little pressure from industry itself for the introduction of free incorporation with limited liability".[147] The Joint Stock Companies Act of 1844 provided an easy means of incorporation but did not go as far as the Code de commerce of 1807 since the 1844 Act did not provide for limited liability.[148] Foreign companies doing business in England through a branch could benefit from limited liability for their shareholders in the country of incorporation.[149] Limited liability was extended to joint stock companies registered under the 1844 Act by the Limited Liability Act of 1855. English limited-liability companies were thus created by the Joint Stock Companies Act of 1844 and the Limited Liability Act of 1855. These Acts were repealed by the Joint Stock Companies Act of 1856 that became the general incorporation act for limited-liability

144 Edwards JR (2019) p 77.

145 Lamoreaux NR, Rosenthal JL (2005) p 32 on company law in the mid 19th century: "A brief consideration of the case of Great Britain, the canonical common-law country, shows that its law of organizations was in important respects more like that of France than the U.S."

146 Edwards JR (2019) p 26.

147 Ireland P (2010). See also Saville J (1956).

148 Limited liability was thus not an English invention. Lipton P (2018): "Most economic analyses of limited liability assume that the only alternative to joint and several unlimited liability is the form of limited liability that was introduced in England in 1856 and has been almost universally adopted. However other alternative forms of limited liability or practices have been adopted or proposed at various times."

149 UK Parliament, Hansard, House of Lords, 9 August 1855, Limited Liability Bill, Lord Stanley of Alderley; UK Parliament, Hansard, House of Commons, 27 June 1854, Law of Partnership, Mr. Collier. Both cited Mr. Kirkman Hodgson who said: "This country is now, I believe, almost the only one in which this law of limited liability does not exist. It prevails in all those with which we have the most extended and important intercourse, and this isolation acts very injuriously in many cases to the English merchant. I could mention whole trades which, thirty years ago, were entirely carried on by English houses, in which at the present moment scarcely one is to be found; their places have been entirely supplied by foreigners, who establish branches of their houses here and in the manufacturing districts, while the main establishments (almost all under the *commandite* principle) are abroad." Hodgson was member of the Mercantile Laws Commission that had published a report. See Royal Commission on Mercantile Laws (1854); Saville J (1956); Bryer RA (1997). Lipton P (2018): "Edward Pleydell-Bouverie, Vice-President of the Board of Trade, claimed that increasing numbers of companies were seeking incorporation in France and the US to gain shareholder limited liability. He drew support for this argument from a memorandum of Thomas Baker to the Royal Commission on Mercantile Laws, which claimed that 20 'English' companies incorporated in France in 1853–54."

companies.[150] *Salomon v Salomon* confirmed that the limited liability of shareholders was connected to the separate legal personality of the company.[151]

The normative system. The concession system was followed by the normative system. Under the normative system, a limited-liability company came into existence as a legal person after it was founded in accordance with the statutory requirements and registered. There was no authorisation requirement.

The normative system became popular because of new state interests. The British share of global industrial production rose from two to twenty percent between 1760 and 1860.[152] Some English companies incorporated in France. [153] In France, English companies were permitted to operate freely under the Treaty of 30 April 1862. A few months later, the English Companies Act dated 7 August 1862 provided for free incorporation.[154] Both influenced the evolution of French company law.[155] Government authorisation was abolished for French companies as well, because new technologies and banks needed funding and French companies faced English competition.[156] The normative system was adopted in France by the law of 23 May 1863 (sur les sociétés à responsabilité limitée)[157] and the law of 24 July 1867 (sur les sociétés).[158]

150 See, for example, Evans F (1908) p 464.
151 Salomon v A Salomon & Co Ltd [1897] AC 22.
152 Kennedy P (1987).
153 See Lipton P (2018).
154 Section 18 of the Companies Act, 1862. For the text, see Pulbrook A (1865).
155 Rochat J (2018): "The slow evolution that we observe in France was not entirely autonomous as it was affected by external factors, notably the law of neighboring countries as well as modifications to alternative legal forms. Certainly, this was the case in 1863–1867, when reforms were introduced that were, at least in part, a reaction to the 1856 Joint Stock Companies Act in the United Kingdom, the Treaty of 30 April 1862 that authorized British companies to freely operate in France, and a French law of 1856 that significantly strengthened restrictions on publicly traded partnerships (Doughi, 1979)."
156 Schäffle A (1865) p 245; von Gierke O (1868) § 69.A.4 p 999; Meisel N (2004) p 23. Rochat J (2018); Ducouloux-Favard C (1992) p 857: "Le Traité de libre-échange conclu le 30 avril 1862 avec l'Angleterre fit appraitre que law rigidité du droit français par rapport au droit anglo-saxon risquait de mettre les enterprises françaises en état d'infériorité par rapport aux entrepreneurs anglais."
157 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée. Article 1 of the law of 1863: "Il peut être formé, sans l'autorisation exigée par l'article 37 du Code de commerce, des sociétés commerciales dans lesquelles aucun des associés n'est tenu au-delà de sa mise. Ces sociétés prennent le titre de sociétés à responsabilité limitée …"
158 Loi du 24 juillet 1867 sur les sociétés commerciales. See Kuhn AK (1912) p 57. Article 21 of the law of 1867: "A l'avenir les sociétés anonymes pourront se former sans l'autorisation du gouvernement …"

In order not to hamper local companies' competitiveness, the founding of joint stock companies was liberalised in Spain (1869), Germany (1870), Belgium (1873) and Italy (1883).[159] In the US, a related phenomenon was later called a race to the bottom.[160]

Germany became the leading country in the development of company law in the latter half of the nineteenth century. The normative system was introduced by the company law reform of 1870 (Aktienrechtsnovelle)[161] that amended the commercial code (das Allgemeine Deutsche Handelsgesetzbuch, ADHGB). The reform was intended to go further than the English Act of 1862.[162]

After the 1870 reform, Germany became a country that exported its company law.[163] This happened at the same time as German firms reaped the benefits of a larger German market and the new legal infrastructure. In the three decades before the First World War, the economies of the United States and Germany were the most productive and most competitive in the world.[164] While the UK's share of global industrial production collapsed from 32% in 1870 to 14% in 1913, the share of the US increased from 23% in 1870 to 36% in 1913 and the share of Germany from 13% in 1870 to 16% in 1913.[165] At the same time, there was a vast expansion of multinational enterprises in the world triggered by revolutions in transportation and communication (the spread of railroads, steamships, and cables).[166]

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159 Gareis K, Fuchsberger O (eds) (1891) § 117; Meisel N (2004) p 41 note 4.

160 The notion of a "race to the bottom" was coined by Berle AA, Means GC (1932). It was accepted by US Supreme Court Justice Louis Brandeis in his dissenting opinion in Louis K. Liggett Co. v. Lee, 288 U.S. 517 (1933). In *Liggett v Lee*, Brandeis describes how firms were formed in US "states where the cost was lowest and the laws least restrictive" which led to a race "not of diligence but of laxity".

161 Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften of 11 June 1870. See Schnorr T (2000) p 17.

162 von Hein J (2008) p 92 "Die englische Lösung, das Normativsystem nur formell auszugestalten, dies aber durch eine Haftung der Gründer für die Richtigkeit der emissionsbegleitenden Angaben ('Prospekttheorie') und eine gesetzliche Standardsetzung (model charter) zu flankieren, wurde abgelehnt, obwohl sich in der Reformdiskussion namhafte Stimmen dafür ausgesprochen hatten."

163 *Ibid.*, p 99: "Diese nationale Verengung der Sichtweise steht in engem Zusammenhang damit, dass Deutschland im ausgehenden 19. Jahrhundert auf dem Gebiet des Aktienrechts von einem rezipierenden zu einem sein Recht exportierenden Staat geworden war." See, for example, Berle AA, Means GC (1932). The work of Berle and Means seems to have been influenced by the separation of ownership and professional management under German law.

164 Chandler AD (1990) pp 595–596.

165 *Ibid.*, p 4, citing Rostow WW (1978) pp 52–53.

166 Wilkins M (2005) p 51.

Recognition. The normative system and foreign trade raised the question of the recognition of companies incorporated under the laws of another country. For example, the Treaty of 30 April 1862 authorised British companies to freely operate in France.[167] The recognition of foreign companies increased the number of company forms available to firms. In the US, the Supreme Court held in *Paul v Virginia* that in principle states ought to allow corporations incorporated in a different state to do business freely.[168] This case facilitated not only interstate trade but even the right to choose from a large pool of company forms and the race to the bottom in the US.

There is no obligation under public international law for states to recognise the legal personality of a foreign corporation. The recognition of foreign companies was connected to the development of international private law. In the nineteenth century, courts and commentators in European countries suggested alternative ways to solve conflicts of law issues in company law matters. Countries finally tended to choose either the incorporation doctrine or the real seat doctrine, or a combination of both doctrines.[169] In modern times, the EU has adopted the incorporation doctrine under the European treaties[170] and the case-law of the ECJ.[171]

The existence of different doctrines of recognition can be illustrated with the effect of Brexit on the recognition of English companies in Germany. Following the withdrawal of the UK from the EU and the EEA, companies incorporated under English law can no longer rely on the right of establishment granted by the European treaties. In Germany, the non-application of the provisions of the Treaty on the Functioning of the European Union (TFEU) to foreign companies not established in a Member State of the EU triggers the application of the traditional rules on the recognition of foreign companies. The German Federal Court of Justice (Bundesgerichtshof, BGH) applies a "modified real seat theory" (modifizierte Sitztheorie). In other words, a foreign entity that is not recognised as a foreign entity is recognised as a national entity according to the provisions of national law. In practice, an English company that has its real seat in Germany

167 See Rochat J (2018); Ducouloux-Favard C (1992) p 857.

168 Paul v. Virginia, 75 U.S. (8 Wall.) 168 (1869).

169 See Grossfeld B (1974); Kersting C (2002).

170 Now Articles 54 and 49 of the Treaty on the Functioning of the EU.

171 The landmark case was C-212/97 Centros [1999] ECR I-1459. It was complemented by the subsequent cases of Überseering, Inspire Art, Sevic, Cartesio, and Vale. See, for example, Mäntysaari P (2005) section 3.3; Mäntysaari P (2010a) p 83.

would not be recognised as an English company but would be regarded as a foreign pseudo-company and recognised as a German partnership.[172]

In 2017, the European Commission pointed out in a notice to stakeholders that UK incorporated companies will be third-country companies not automatically recognised under Article 54 of the TFEU, that Member States will not be obliged to recognise the legal personality and limited liability of companies that are incorporated in the UK but have their central administration or principal place of business in the EU, and that shareholders in such companies might be personally liable for the debts of the company.[173]

Design principles. State interests led to the normative system. Under the earlier concession system, the administrative authorities had exercised certain control. Creditors and shareholders suffered when the administrative control was relaxed.[174] The adoption of general incorporation acts under the normative system made it necessary to design new mechanisms to protect against fraudulent company ventures.[175] Many other design principles emerged gradually. We will now have a look at the development of such design principles and start with the limited liability of shareholders.

2.4.3 The Limited Liability of Shareholders

The limited liability of all shareholders was not characteristic of all early limited-liability companies.[176] In nineteenth-century continental Europe, limited liability was a question of degree. The liability of investors was limited by earlier contract practices. Contract practices could serve as functional equivalents to the limited-liability company. Such contract practices not only influenced the codification of

172 BGHZ 151, 204.

173 Notice to Stakeholders: Withdrawal of the United Kingdom and EU rules on company law. European Commission, Directorate-General Justice and Consumers, 21 November 2017.

174 Kuhn AK (1912) p 57.

175 Schnorr T (2000) p 18 citing Stenographische Berichte 1870 p 650. See also Hopt KJ (2019a) II.1(a): "The two main problems of public companies were soon to appear: scandals, fraud, and the breakdown of companies showed the need for investor protection by company law; and the consequences of such failures for creditors, the economy, and the state were a matter of general concern. So it quickly became clear that public company law had two goals: the protection of persons, either individually or as a class, and the protection of the public interest."

176 Article 33 of the Code de commerce (1807); Angell JK, Ames S (1846) Chapter XVII § 1 p 531; Lamoreaux NR (1998) p 67 on nineteenth-century company law in the US: "It is important to realize that ... differences between the partnership and the corporation were not rigidly fixed, but rather varied in magnitude over time."

company forms. They even influenced the codification of ways to limit the liability of shareholders that were responsible for the management of the company in the capacity of directors or board members.

Limited partnerships with shares in France. In France, Napoleon's 1807 Code de commerce provided for three kinds of company forms, namely the partnership (société en nom collectif), the limited partnership (société en commandite), and the limited-liability company (société anonyme).[177] The fundamental feature that distinguished the société anonyme of 1807 from the other two company forms was the limited liability enjoyed not just by limited partners but by all partners.[178] Early limited-liability companies such as the French société anonyme of 1807 and the English limited company of 1862[179] have been described as limited partnerships with just limited partners.[180]

Limited liability was a question of degree in continental Europe. The French limited partnership (société en commandite) turned into a functional equivalent of the limited-liability company (société anonyme). An important advantage of the limited partnership was that it enabled the general partners to raise funds from wealthy individuals who were not interested in active participation in the business.[181] It had the additional benefit of flexibility as the partners were free

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177 Article 19 of the Code de commerce (1807): "La loi reconnait trois espèces de sociétés commerciales: – la société en nom collectif; – la société en commandite; – la société anonyme."
178 Kuhn AK (1912) p 56; Rochat J (2018): "The drafters of the Code themselves admitted that they drew most of their material from the Colbert Orders of 1673–1681, and the only novelty was what was said about bankruptcy (Commercial Code Project, presented by the Committee appointed by the Government on 13 Germinal year IX, 1801, pp. vii–xxxvii)." Generally, see Renaud A (1875) § 1 p 1: "Die Vereinsform, welche man mit dem namen 'Actiengesellschaft' zu bezeichnen pflegt, characterisirt sich im Allgemeinen als eine Verbindung, welche mit einem zum Voraus festgestellten und ihr gesicherten Capitale für ein gegebenes Unternehmen in der Art zu wirken geeignet ist, dass jenes Vermögen regelmässig allein für die Schulden der Gesellschaft einsteht." *Ibid.*, § 5 pp 69–70: "Eine solche Verbindung, bei welcher der Realcredit die alleinige Grundlage des Vereinsunternehmens bildet, ist … die Actiengesellschaft im Sinne des Allg. deutschen Handelsgesetzbuchs, welches als characteristisch für diese Vereinsform ausser einem in Actien zerlegten Grundcapitale hervorhebt (Art. 207), dass sich die sämmtlichen Gesellschafter nur mit Einlagen betheiligen, ohne persönlich für die Verbindlichkeiten der Gesellschaft zu haften."
179 Section 6 of the Companies Act, 1862: "Any seven or more persons associated for any lawful purpose may, by subscribing their names to a Memorandum of association, and otherwise complying with the requisitions of this act in respect of registration, form an incorporated company, with or without limited liability." See sections 7–9 on companies limited by shares and companies limited by guarantee and section 10 on unlimited companies.
180 Kuhn AK (1912) p 56. See article 19 of the Code de commerce of 1807 and sections 6 and 7 of the Companies Act, 1862.
181 See Lamoreaux NR, Rosenthal JL (2005) pp 33–34.

to agree on more issues.[182] These limited partnerships could therefore take a variety of forms. By the third decade of the nineteenth century, some limited partnerships had begun to issue bearer shares.[183] French law distinguished between sociétés en commandite simple, sociétés en commandite par actions nominatives, and sociétés en commandite par actions au porteur (limited partnerships with bearer shares).[184] The fundamental difference between a limited partnership with bearer shares and a limited-liability company (société anonyme) was the unlimited liability of at least one shareholder in a limited partnership. In the vast majority of cases, there was no business need to choose the limited-liability company form in France in the first half of the nineteenth century.[185]

The popularity of the limited partnership with shares meant that there were more cases of abuse relating to this particular company form. The law of 1856[186] regulated the issuance of shares and strengthened the limited partners' rights against the managing partners.[187]

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182 *Ibid.*, p 40: "There were, of course, limits to what organizers of commandites simples could do: there had to be at least one general partner; shares were not tradable; and the only way to replace a general partner was to dissolve the firm and form a new one. The last two of these limitations could be overcome (without giving up any of the flexibility of the societe´ en nom collectif or the commandite simple) by organizing the firm as a commandite par actions … Not only were the shares of these ventures tradable, but shareholders might also hold regular annual or biannual meetings at which they could fire the manager or change other aspects of the organization."

183 *Ibid.*, pp 33 – 34.

184 For the number of different company forms founded between 1847 and 1860, see the table in Dougui N (1981) p 272, citing A. Moulard, Des sociétés commerciales en France, Revue contemporaine, February 1863, p 530.

185 Generally, see Rivière HF (1857); Dougui N (1981) p 268: "Pendant plus d'un demi-siècle, le Code de commerce n'a jamais été sérieusement mis en cause par les milieux d'affaires français; tant que les entreprises gardaient un caractère familial, les chefs d'entreprises se sont accommodés sans difficulté des restrictions imposées par le de 1807. Mais à partir du moment où les progrès techniques l'augmentation des frais de premier établissement, le recours au rassemblement de fonds considérables, par le biais des sociétés de et notamment des sociétés anonymes, devient une nécessité urgente. Ce besoin en capitaux a été satisfait, pendant longtemps, par l'utilisation à grande échelle des formes de substitution aux sociétés anonymes, c'est-à-dire les commandites par actions."

186 La loi du 17 juillet 1856, relative aux Sociétés en commandite par actions.

187 Lamoreaux NR, Rosenthal JL (2005) pp 33 – 34: "In 1830, a group of disgruntled shareholders challenged the legality of this practice on the grounds that it was not explicitly permitted by the Code de Commerce. Loosely constructing the code's provisions, both the Commercial Tribunal of Paris and, on appeal, the Royal Court upheld the practice. Over the next couple of decades, the number of commandites par action, as these enterprises were called, grew rapidly until the passage of legislation in 1856 that more strictly regulated the issuance of shares and

Limited partnerships with shares in Germany. Limited partnerships (Kommanditgesellschaft, KG) and limited partnerships with shares (Kommanditgesellschaft auf Aktien, KGaA) were used in nineteenth-century Germany as well. Again, French law served as a model.[188] The ADHGB 1861 regulated the partnership (offene Handelsgesellschaft, OHG), the limited partnership (Kommanditgesellschaft, KG), and the limited partnership with shares (Kommanditgesellschaft auf Aktien, KGaA) in addition to the limited-liability company (Aktiengesellschaft, AG). The ADHGB 1870[189] and the ADHGB 1884[190] basically treated a limited partnership with shares and a limited-liability company (Aktiengesellschaft) in the same way.

The number of limited partnerships with shares (KGaA) remained small in Germany. It grew after 1997 when the German Federal Court (Bundesgerichtshof, BGH) held that a limited-liability company could act as an unlimited partner.[191] The practice of using a GmbH as an unlimited partner in a GmbH & Co. KG was recognised much earlier in 1912.[192]

The liability of key shareholders. In nineteenth-century continental Europe, it was first assumed that a limited-liability company is managed by one or more shareholders. The regulation of the liability of shareholders entrusted with the management of the company reflected both the allocation of liability between shareholders inter se and the allocation of liability between shareholders and the company.

In France, the code de commerce of 1807 required the company to be managed by mandataries.[193] The term mandataries has a particular meaning in the Code civil (1804). "Le mandataire" or the agent is liable not only for fraud but

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strengthened stockholders' rights with respect to the managing partners (Freedeman, 1979). New legislation in 1863 permitted firms with a maximum capital of 20 million francs to organize as corporations without receiving special permission from the state."

188 Fleischer H, Cools S (2019) p 476.

189 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften. Vom 11. Juni 1870.

190 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften. Vom 18. Juli 1884.

191 BGHZ 134, 392: "Die Errichtung einer KGaA mit einer GmbH als persönlich haftender Gesellschafterin ist grundsätzlich zulässig."

192 BayObLG 16. 2. 1912 – I ZS Reg III 12/ 12, BayOblGZ 13 (1913) 69 and RGZ 105, 101. See Fleischer H (2018c) p 260.

193 Article 31 of the Code de commerce (1807): "Elle est administrée par des mandataires à temps révocables, associés ou non associés, salariés ou gratuits." Translation by Rodman C (1814) p 95: "It is managed by agents or directors who are either stockholders or not, with or without salary, and removable from office at a certain period."

even for mistakes.[194] The provisions of the Code de commerce on mandataries thus complemented the more general provisions in the Code civil according to which mandataries were liable for mistakes in their work.[195] Some shareholders could manage the company in the capacity of mandataries and were liable in that capacity.

Shareholders could even be liable in the capacity of members of the conseil de surveillance (supervisory committee) that was made mandatory under the law of 1856 for limited partnerships with shares (sociétés en commandite par actions).[196] Conseil members were personally liable for the company's obligations where they did not perform their duties properly. The role of the conseil de surveillance changed over time from a communication device between managers and shareholders to a decision-making body. Since limited partners were unwilling to serve on such boards, personal liability for the company's obligations was abolished in 1867.[197]

The French general incorporation law of 1867[198] was built on the design principle that a company should be managed by shareholders.[199] The liability of shareholders now depended on whether and in what capacity they participated in management or monitoring. According to the law of 1867, a société anonyme was managed by administrators ("administrateurs")[200] that were mandataries elected by the general meeting ("assemblée générale") from the pool of shareholders. Moreover, the mandataries could choose one or more of their number to act as a director ("directeur") or directors.[201] The administrators deposited their shares as collateral for the fulfilment of their duties.[202]

194 Article 1992 of the Code civil (1804): "Le mandataire répond non seulement du dol, mais encore des fautes qu'il commet dans sa gestion.

Néanmoins, la responsabilité relative aux fautes est appliquée moins rigoureusement à celui dont le mandat est gratuit qu'à celui qui reçoit un salaire."

195 Article 32 of the Code de commerce (1807): "Les administrateurs ne sont responsables que de l'execution du mandat qu'ils ont reçu …" Translation by Rodman C (1814) p 97: "The directors are responsible only for the execution of the trust committed to them …"

196 La loi du 17 juillet 1856, relative aux Sociétés en commandite par actions. Article V of the law of 1856. See Rivière HF (1857) p 47.

197 See Lamoreaux NR, Rosenthal JL (2005) pp 40 – 41.

198 Loi du 24 juillet 1867 sur les sociétés commerciales.

199 See Article 26 of the law of 1867.

200 Article 22 of the law of 1867: "Les sociétés anonymes sont administrées par un ou plusieurs mandataires à temps, révocables, salariés ou gratuits, pris parmi les associés …"

201 Article 22 of the law of 1867: "… Ces mandataires peuvent choisir parmi eux un directeur, ou, si les statuts le permettent, se substituer un mandataire étranger à la société, et dont ils sont responsable envers elle."

202 Article 26 of the law of 1867.

This was complemented by the codification of the practice of audit committees. The general incorporation law of 1867 required shareholders to elect audit committees but absolved those who served on these committees of personal liability for the company's obligations.[203]

Limited liability after the separation of functions. The German company law reform of 1884[204] was a departure from the French law of 1867 that built on the idea that a company should be managed by shareholders. Shareholders were left with limited liability after shareholders were removed from management.

The ADHGB 1870 had required, in addition to a management board (Vorstand), a supervisory board (Aufsichtsrat) consisting of at least three shareholders[205] whose liability was limited. The regulation of the supervisory board was nevertheless criticised.[206]

In the ADHGB 1884, the function of the supervisory board was improved. There was clearer separation of work between the supervisory board and the management board. Non-shareholders could become members of the supervisory board.[207] Its members were made to observe certain minimum standards. Each member now had a duty act as a diligent businessman and owed a duty of care to the company ("die Sorgfalt eines ordentlichen Geschäftsmannes").[208] In both

203 See Lamoreaux NR, Rosenthal JL (2005) p 41.

204 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften. Vom 18. Juli 1884 (ADHGB 1884). Article 1 of ADHGB 1884 described how ADHGB 1870 was amended: "Die Bestimmungen im zweiten Abschnitte des zweiten Titels und im dritten Titel vom zweiten Buche des Handelsgesetzbuchs, Artikel 173 bis 249a, werden durch nachstehende Bestimmungen ersetzt." For the preparatory works, see Amtliche Begründung des Entwurfs eines Gesetzes, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften vom 7. März 1884, Aktenstück Nr. 21.

205 Article 209 of ADHGB 1870: "Der Gesellschaftsvertrag muß insbesondere bestimmen: ... 6) die Bestellung eines Aufsichtsrathes von mindestens drei, aus der Zahl der Aktionaire zu wählenden Mitgliedern; ... 8) die Art der Bestellung und Zusammensetzung des Vorstandes und die Formen für die Legitimation der Mitglieder desselben und der Beamten der Gesellschaft; ..." Compare article 22 of the French law of 1867.

206 Lutter M (2007) p 392: "Der ... Aufsichtsrat ... hatte in den ersten Jahren weniger Aufsichts-, sondern Geschäftsführungsaufgaben übernommen. Auch der Gesetzgeber stellte in der Begründung zur Novelle von 1884 fest, dass der Aufsichtsrat die bei Erlass des Gesetzes von 1870 gehegten Erwartungen nicht erfüllt habe. Die Gründe dafür wurden in der Ausgestaltung des Aufsichtsrats, der unklaren Abgrenzung seiner Funktionen under mangelhaften Bestimmung seiner Pflichten sowie seiner ungenügenden Verantwortlichkeit gesehen."

207 See *ibid*.

208 Article 241(2) of ADHGB 1884: "Die Mitglieder des Vorstandes haben bei ihrer Geschäftsführung die Sorgfalt eines ordentlichen Geschäftsmanns anzuwenden." Article 226(1) of ADHGB

boards, board members were made jointly and severally liable as members of a collegiate organ.[209] The delegation of functions was prohibited.[210]

Lack of limited partnerships in England and the US. The lack of a limited partnership influenced the limited liability of shareholders in England the US.

In the nineteenth century, the limited partnership was introduced in Louisiana and New York. Lousiana had adopted the French Code de commerce and New York used French law as a model.[211] However, limited partnerships failed to take off in the US and England, because limited partnerships were not supported by the body of common-law precedent.[212] Combined with the rigid interpretation of the foundational documents of companies (charters, by-laws, articles of association), the absence of limited partnerships reduced the flexibility of company law in these countries.[213] In England, limited partnerships could be established after the adoption of the Limited Partnerships Act, 1907.

The founders of the company could choose between a limited-liability company and a partnership. In continental Europe, the limited liability of shareholders was more a question of choosing between alternative company forms with different degrees of shareholder liability and room for freedom of contract in limited partnerships. In common law countries, the existence or non-existence of limited liability turned more into a question of piercing the corporate veil, as was discussed in the Salomon's case.[214]

Conclusion. In the nineteenth century, the limited liability of shareholders was a question of degree. Early limited-liability companies can be described as limited partnerships with just limited partners. In France and Germany, shareholders that participated in management or monitoring in corporate bodies were not free from liability. The limited liability of shareholders was completed in con-

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1884: "Die Mitglieder des Aufsichtsraths haben bei Erfüllung der ihnen nach Artikel 225 zugewiesenen Obliegenheiten die Sorgfalt eines ordentlichen Geschäftsmanns anzuwenden."

209 Article 226(2) of ADHGB 1884: "Dieselben sind der Gesellschaft neben den Mitgliedern des Vorstandes persönlich und solidarisch zum Ersatze verpflichtet, wenn mit ihrem Wissen und ohne ihr Einschreiten entgegen den gesetzlichen Bestimmungen ..." Article 241(3) of ADHGB 1884: "Mitglieder, welche ihre Obliegenheiten verletzen, haften der Gesellschaft solidarisch für den dadurch entstandenen Schaden ..."

210 Article 225(4) of ADHGB 1884; Lutter M (2007) p 392.

211 Fleischer H, Cools S (2019) p 477.

212 See Lamoreaux NR, Rosenthal JL (2005) p 36. For the state of English law in mid-nineteenth century, see UK Parliament, Hansard, House of Commons, 27 June 1854, Law of Partnership, Mr. Collier; Saville J (1956).

213 See Lamoreaux NR, Rosenthal JL (2005) p 55.

214 Salomon v A Salomon & Co Ltd [1896] UKHL 1, [1897] AC 22.

tinental European company law when shareholders were removed from management.

2.4.4 The Nature of the Legal Person and the Self-Governance of the Firm

If the limited liability of shareholders was a question of degree in the nineteenth century, there may have been things that were more fundamental for the limited-liability company.[215] The separate legal personality of the company seems to have been more fundamental. Questions about separate legal personality became important because of the adoption of general incorporation acts. Separate legal personality means in effect the separation of assets and debts, the separation of administration, and the separation of the attribution of actions and knowledge (section 2.3.3).[216] Separate legal personality made it necessary to regulate the company's existential questions and design mechanisms for protection against fraudulent company ventures.

Moreover, separate legal personality made it necessary to legitimate the corporate form and corporate power (section 2.4.13).[217] Corporate power had a connection to the perceived nature of the corporate form.

Separate legal personality and free incorporation led to the emergence of corporate self-governance as an important design principle. There have been different models of corporate self-governance in Europe. In addition to the distinction between the member corporation and the property corporation, these models are linked to the so-called organic theory and the mandate theory.

Member corporations and property corporations. The perceived nature of the corporate form reflected the distinction between member corporations and property corporations.

According to Karl Lehmann's empirical study, there were two main models of European incorporation practice in the seventeenth and eighteenth centuries, namely the corporation model ("Corporationstypus") and the association model ("Verbandstypus").[218] Lehmann's corporation model could also be called the member corporation. The association model could also be called the property

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215 Lamoreaux NR (1998) 68 – 69 on the reluctance of small firms to adopt the limited partnership in nineteenth-century corporate practice in the US.

216 For "entity shielding", see even Hansmann H, Kraakman R, Squire R (2006); Lamoreaux NR, Rosenthal JL (2006).

217 Hurst JW (1970) on how the corporate form was made legitimate in the US. Mitchell DT (2009) on how corporate law was used to make corporate power legitimate in the US.

218 Lehmann K (1895) § 5 p 57.

corporation. The member corporation and the property corporation have their roots in canon law that distinguishes between *universitates personarum* (aggregate of persons) and *universitates rerum* (aggregate of things).[219]

From early on, continental European legislators distinguished between the member corporation and the property corporation. The distinction between *sociétés de personnes* and *sociétés de capitaux* in France and between Personengesellschaften and Kapitalgesellschaften in Germany is an echo of the distinction between *universitates personarum* and *universitates rerum* in canon law.[220]

According to Lehmann, the property corporation (that he called the association model) had its own characteristics. The company was regarded as an independent entity, shareholders originally had no or very limited governance rights, and the rights of shareholders were limited to economic rights. Moreover, the company resembled a foundation rather than a partnership. The property corporation (that he called the association model) reflected Dutch practices such as the first octroi of the VOC. The property corporation prevailed in continental Europe.[221] The governance rights of shareholders were gradually increased under this model. Some governance rights were first vested in the main shareholders and finally in all shareholders.[222]

The absence of this distinction in English common law meant that English common lawyers "were instead all but bound to describe property corporations, as developed on the Continent, as some variety of member corporation".[223] According to Lehmann, the member corporation (that he called the corporation model) had its roots in the governance of municipalities as well as in maritime practices in which the mutual relations of the parties were regulated by the parties themselves.[224] Under this model, power was allocated to shareholders in general meeting and shareholders acted as directors. The member corporation reflected the practices of English companies at least until the 1840s or 1850s when the nature of shareholding changed due to the 1837 case of *Bligh v. Brent* and free incorporation.[225] After *Bligh v. Brent*,[226] the wording of the early

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219 Code of Canon Law 115 §1; Ciepley D (2019).

220 Code of Canon Law 115 §1; Ciepley D (2019).

221 Lehmann K (1895) § 5 pp 57–58.

222 *Ibid.*, § 6 p 66.

223 Ciepley D (2019).

224 Kuhn AK (1912) p 43; Renaud A (1875) § 50 pp 458–459. See even Angell JK, Ames S (1846) Chapter XIV § 1 p 452: "The rule applicable to municipal corporations, viz. that all corporate affairs must be transacted at an assembly convened upon due notice, at a proper time and place, consisting of the number of persons, the proper officers, classes &c, will in general apply to private corporations …"

225 Ireland P (2018).

Companies Acts gradually changed to reflect the fact that the company is distinct from its shareholders.[227]

US company law was influenced by English common law. Early US companies can therefore be described as member corporations. In mid-nineteenth century, Angell and Ames built on the common law notions of property, contract, and agency, as well as the doctrine that the powers of the corporation and their allocation were based on the wording of the charter.[228] Common law was later recycled in the notion of the firm as a contract, in the agency theory, and in the property rights theory.[229]

According to Angell and Ames, whoever was the owner of property was free to dispose of his property as he pleased: "Private and particular corporations, founded and endowed by individuals for charitable purposes, are, without any special reservation of power to that effect, subject to the private government of the founder and his heirs; not from any ecclesiastical canons or constitutions, but by appointment of law, as an incidental right, arising from the property which the founder had in the land or funds assigned to support the charity. The origin of such a power … is the property of the donor, and power every one has to dispose, direct, and regulate his own property … ; and therefore … the law allows the founder, or his heirs or, the person specially appointed by him to be visitor, to determine concerning his own creature."[230]

Like in England, US businesses were formed according to private articles of agreement, so that even though these businesses actually were partnerships,

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226 Bligh v. Brent (1837) 2 Y & C Ex 268, 295 by Alderson B: "… the individual members of a corporation are quite as distinct from the metaphysical body called "the corporation," as any others of his Majesty's subjects are."

227 Ireland P (2018); Ireland P (2010); Ireland P (1996) p 47 pointing out that section 3 of the 1856 Joint Stock Companies Act permitted seven or more persons to "*form themselves* into an incorporated company", but section 6 of the 1862 Companies Act permitted seven people "to form" an incorporated company. This indicates that the 1856 company was made of people but the 1862 company was made by people.

228 The Case of Sutton's Hospital, 5 Co. Rep. 23 (1526–1616), reprinted at 285 (1826). This 1612 case is generally regarded as one of the most important early cases on corporations. See Arner D (2002) p 29.

229 Bratton WW (1989) p 1513: "The new economic theory presented something new to the world of neoclassical microeconomics when its neoclassical variant appeared in the 1970s … But transposed to a legal context, the assertion was less new than it looked. Contract always has figured into the legal theory of the firm. The new economic theory confirms and repeats legal history when it asserts that the corporation 'is contract.'" See Jensen MC, Meckling WH (1976).

230 Angell JK, Ames S (1846) Chapter XIX § 2 pp 611–612.

they approximated the joint stock form.[231] Private corporations were regarded as a contract. In the important 1819 case of *Dartmouth College*, the court held that the corporate charter was a contract.[232] Angell and Ames wrote: "Private corporations … are created by an act of the legislature which is regarded as a contract, and one which, so long as the body corporate faithfully observes, the legislature is constitutionally restrained from impairing, by annexing new terms and conditions onerous in their operation, or inconsistent with the liberal and rational construction of the grant …"[233] The fact that a private corporation was regarded as a contract seems to have been more important than the limited liability of shareholders[234] and even more important than it was in England due to the irrevocable nature of the corporate charter under *Dartmouth College*.[235] In fact, Angell and Ames pointed out that the English articles of agreement and the US charter were not the same thing.[236]

In the US, property rights were complemented by the common law notion of agency. According to Angell and Ames, the main rule was that "corporate affairs must be transacted at an assembly".[237] They pointed out that "the only mode in which a corporation aggregate can act or contract is through the intervention of agents". Moreover, "[c]orporations, like natural persons, and bound only by the acts and contracts of their agents done and made within the scope of their authority."[238]

231 Arner D (2002) p 43.

232 See Arner D (2002) p 49.

233 Angell JK, Ames S (1846) Chapter I § 1 pp 27–29: "Private corporations, on the other hand, are created by an act of the legislature which is regarded as a conctract, and one which, so long as the body corporate faithfully observes, the legislature is constitutionally restrained from impairing, by annexing new terms and conditions onerous in their operation, or inconsistent with the liberal and rational construction of the grant … Private corporations are indisputably the creatures of public policy, and in the popular meaning of the term, may be called public; but yet if the whole interest does not belong to the government (as if the corporation is created for the administration of civil or municipal power,) the corporation is private."

234 See Arner D (2002) pp 45–46 discussing Handlin O, Handlin MF (1945).

235 See Arner D (2002) pp 51–53.

236 Angell JK, Ames S (1846) Preface: "What is done in England by combination, unless it be the management of municipal concerns, is most generally done by a combination of individuals, established by mere articles of agreement. On the other hand, what is done here by the coöperation of several persons, and by the combination of their capital, industry and skill, is, in the greater number of instances, the result of a consolidation effected by an express act or charter of incorporation." Cited in Arner D (2002) p 51. See also Harris R, Lamoreaux NR (2019) on differences between English and US company laws.

237 Angell JK, Ames S (1846) Chapter XIV § 1 p 452.

238 *Ibid*., Chapter IX § 9 p 288.

As a rule, all powers emanated from shareholders: "The power to appoint officers and agents rests, of course, like every other power, in the body of the corporators, unless some particular board or body, created or existing within the corporation, is legally vested with it".[239]

There was thus a fundamental difference between continental European company law on one hand and English common law and US company law on the other regarding the nature of the corporate form. The difference between the property corporation and the member corporation influenced corporate power.

Organic theory, mandate theory and contractual theory. In addition to the fundamental difference between the member corporation (Lehmann's corporation model) and the property corporation (Lehmann's association model), there is a fundamental difference between the organic theory (Otto von Gierke) and the mandate or fiction theory (Friedrich Carl von Savigny).

The organic theory is better aligned with the property corporation (Lehmann's association model). This theory was adopted in continental Europe. It is also known as corporate realism.[240] The mandate theory is better aligned with the member corporation. Of these two theories, the mandate theory was stronger in England and the US.[241] We can have a look at the mandate theory and how its failings were addressed by the organic theory.

The mandate or fiction theory of von Savigny was summed up by Frederic William Maitland[242] as follows: "Besides men or 'natural persons,' the law knows as 'subjects' of proprietary rights certain fictitious, artificial or juristic persons, and as one species of this class it knows the corporation. We must carefully sunder this ideal person from those natural persons who are called its members. It is capable of proprietary rights; but it is incapable of knowing, intending, willing, acting ... Being but a fiction of the law, its personality must have its com-

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239 *Ibid.*, Chapter IX § 1 p 256.

240 Bratton WW (1989) p 1490. Harris R (2006) p 1424 calls it "the real entity theory, also called the natural entity theory".

241 See, for example, Angell JK, Ames S (1846) Chapter IX § 1 pp 256 – 257: "In general, the only mode in which a corporation aggregate can act or contract is through the intervention of agents, either specially designated by the act of incorporation, or appointed and authorized by the corporation in pursuance of it. It is an old rule of the common law, that such a corporation cannot lay a fine, acknowledge a deed, or appear in a suit, except by attorney or agent ..." See also Harris R (2006) p 1424 on the various names of this theory: "the state grant theory, also called the fictitious personality theory, the artificial personality theory, the concession theory or the hierarchical theory".

242 For Frederic William Maitland and Ernst Freund as the importers of German theory to Anglo-American corporate law, see Harris R (2006) pp 1431 – 1435.

mencement in some authoritative act, some declaration of the State's will. Finally, it may continue to exist though it no longer has even one member."[243]

The Savignian theory was better aligned with the older concession system (under which incorporation required state authorisation) than with the later normative system (under which free incorporation was facilitated by general incorporation statutes).[244]

According to Maitland, the problem with the Savignian theory was the lack of internal coherence in its application. In particular, if the corporation is just a legal fiction, it cannot have appointed anyone to be its agent. If it, as a principal, has appointed a person to act as its agent, it must be more than a mere fiction and able to do other things as well.[245] In practice, three alternative ways were used to address this problem.

First, von Savigny solved the problem with the help of guardianship rather than contracts or agency. According to Maitland, von Savigny was skilful: "It is not in agency but in guardianship of the Roman kind that he finds the correct analogy."[246]

Guardianship in Roman law is vaguely related to the later common law notion of trust. In eighteenth-century English common law, legal title to the company's property was vested in the company that was regarded as a body of shareholders or "members". The company held its property in trust for the individual members. Members held an "equitable interest" in the property as its "beneficial" or "equitable owners".[247] In mid-nineteenth-century US, directors took the place of the company as the trustees for shareholders:[248] "The relation between directors of a corporation, and its stockholders, is that of trustee and *cestuis que trust*."[249] In 1932, this made Dodd ask: "For whom are corporate managers trustees?"[250] In 1999, Blair and Stout argued that corporate directors "perhaps most closely resemble trustees".[251]

Second, there was a particular way to get around Maitland's problem in the US. It was to fall back on the notions of English common law that preceded

243 Maitland FW (1913) pp xx.
244 See also Harris R (2013) p 372.
245 Maitland FW (1913) pp xx—xxi.
246 *Ibid*.
247 Ireland P (1996) pp 49–50; Ciepley D (2019).
248 Ciepley D (2019).
249 Butts v. Wood, 38 Barb. 181, 189 (1862).
250 Dodd M (1932).
251 Blair MM, Stout LA (1999) p 291.

both the realist theory and the fiction theory.[252] Otto von Gierke's realist theory was never accepted in the US and the fiction theory was dropped before the end of the nineteenth century.[253] The problem was addressed simply by assuming that the corporation is a contract between shareholders.[254] This theory is known as the "the contract, aggregate, or partnership theory".[255] After the dropping of other theories, the intense legal discourse "abruptly subsided" around the mid-1920s.[256]

In the US, the notion of the corporation as a contract was reinforced by the Supreme Court's practice of extending constitutional rights to corporations. Extending constitutional rights to corporations was achieved simply by upholding the existing constitutional rights of a corporation's citizen members.[257] In cases like *San Mateo*[258] and *Citizens United v. FEC*,[259] the US Supreme Court regarded the corporation as an association of member-owners.

Third, von Gierke argued that a corporation is not a fiction. It is a person that has its own will, a group-person with a group-will. It acts through its organs.[260] His answer to the problems inherent in the mandate theory and the notion of the company as a contract was to avoid them by replacing the mandate theory with the organic theory.

In company law, the choice between the mandate theory and the organic theory – or the contract theory that replaced both in the US – boils down to the question in whose interests board members and managers must act when they have a duty to act in the interests of the company (section 2.4.13). Because

252 Harris R (2006) p 1435–1436: "In the United States, a contractual theory emerged indigenously before the transplant."

253 Bratton WW (1989) pp 1502 and 1510.

254 See Maitland FW (1913) pp xxiv–xxv: "When all is said and done, and all due praise has been awarded to the inventors of a beautiful logarithm, are not these shareholders, these men of flesh and blood, the real and only sustainers of the company's rights and duties? ... Contract, the greediest of legal categories, which once wants to devour the State, resents being told that it cannot painlessly digest even a joint-stock company." In the UK, one of the most oft-cited definitions is that provided by Farwell J in Borland's Trustee v Steel Bros & Co Ltd [1901] 1 Ch 279 at 288.

255 See Harris R (2006) p 1424.

256 *Ibid.*, p 1423.

257 Ciepley D (2019).

258 County of San Mateo v. Southern Pacific Railroad Co., 116 U.S. 138 (1885).

259 Citizens United v. Federal Election Commission, 558 U.S. 310 (2010).

260 See Maitland FW (1913) pp xxv—xxvi.

of this, the choice between the mandate theory and the organic theory is not without purpose and effect.[261] The choice could have a large societal impact.

If the company is assumed to be a fiction with no will of its own (mandate theory), its managers and board members can only be the agents and servants of a third party that exists and can have a will. In practice, the mandate theory leads to the assumption that the company really is its members.[262] Whoever argues that the company is a legal fiction or a contract ends up allocating more power and distributing more assets to shareholders.[263]

If the company is assumed to exist and have a will of its own (organic theory), managers and board members can act in the interests of the company as its organs and are not supposed to act primarily in the interests of any third party.[264] Whoever argues that the company has its own interests and its own will ends up defining the interests of the company as the interests of the firm, that is, as the interests of the company's business.[265]

Self-governance of the firm or self-governance of shareholders. The choice between the two models member corporation and property corporation, and the recognition or non-recognition of the organic theory, influenced the regulation of what we now call corporate governance. It was more important to regulate corporate governance in continental European company law, and less important to do so in English common law and US company law. Fundamental design principles emerged for corporate governance in continental Europe. One of the funda-

261 See nevertheless Smith B (1928) pp 292–293: "The voluminous arguments about whether corporate personality is real or fictitious, are, for the most part, to no purpose, chiefly for lack of a definition of terms. One man's reality is another man's fiction."

262 See, for example, Kahn-Freund O (1944) p 56: "[E]ven outside the immediate scope of application of the Salomon rule the 'corporate entity' metaphor continue to hold its tyrannical sway … The need for lifting the veil must be obvious to the realists even more than to those who, like the present writer, have never been convinced by the reasoning of Maitland or Gierke."

263 See, for example, Klages P (2008) p 5734: "Bemerkenswert ist die Verwandtschaft des nexus of contracts-Begriffes sowohl mit Savignys Fiktionstheorie als auch mit Lehmanns Begriff des Anlegerverbandes."

264 See already Maitland FW (1913) xl: "If we say that the corporation itself has acted by its organs, as a man acts by brain and had, then the corporation is liable; but the result may be very different if we reduce the directors to the level of servants or agents. Those therefore who have been striving for the 'organic idea' have not been fighting for a mere phrase, and now the term 'Organ' stands in the Civil Code of Germany. That is no small triumph of Realism."

265 See, for example, Klages P (2008) p 5731 on the connection between von Gierke's theory and Rathenau's theory.

mental design principles developed in Germany was the self-governance of the firm.[266]

The self-governance of the firm within the legal framework of a limited-liability company was the original goal of the German company law reform of 1870.[267] Legislative changes after the reform of 1870 were designed to improve the self-governance of the firm.[268] At the same time, the limited-liability company was perceived as a tool used by firms. This could be seen in the existence of alternative company forms and the use of many legal entities in corporate groups.[269]

Building on the alternative theories, the fundamental question of the self-governance of the firm was whether the self-governance of the firm meant the self-governance of the shareholders of the company or the self-governance of the organisation of the company.

In continental Europe, the property corporation (Lehmann's association model) and the self-governance of the organisation of the company prevailed. This was because political democracy was not regarded as a good model for corporate governance, and because the self-governance of shareholders did not

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266 Lamoreaux NR (1998) p 67 on US company law: "It makes sense … to conceptualize the differences between partnerships and corporations, not in terms of discrete categories, but rather in terms of continuous variables that could take on different values at different points in time. In particular, the differences between these forms might be arrayed along two dimensions. The first dimension would be liability (the extent to which members of a firm were responsible for the enterprise's debts), with partnerships generally high on liability compared to corporations. The second might be thought of as a measure of the firm's autonomy (the extent to which it had a legal existence beyond that of its members)."

267 Fischer CE (1955) p 89: "Das Ziel war klar: Eine sich 'selbstverwaltende' juristische Person in AG-form." For self-enforcement as a design principle in corporate governance and corporate law, see Mäntysaari P (2012) Chapter 8.

268 Fischer CE (1955) p 115: "Es ist eindeutig, daß sämtliche Einzelbestimmungen der Aktiengesetze aus den Jahren 1870/1884/1931 und 1937 auf die AG als eine in sich unabhängige, wirtschaftlich selbständige Unternehmenseinheit abgestellt sind. Daraus leitete unsere Rechtsordnung die Anerkennung einer 'juristischen Person' ab, die mit der Kodifikation des Jahres 1870 zur 'inneren Selbstverwaltung' mündig erklärt worden war."

269 *Ibid.*, pp 117–118: "Der eigentliche Kern der Problematik der Konzernbildung und eben der Tatsache, daß nahezu drei Viertel aller AG-en nicht, wie es sich der Aktiengesetzgeber vorgestellt hat, in sich wirtschaftlich selbständig und unabhängig sind, liegt darin begründet, daß es die wirtschaftliche Praxis verstanden hat, sich in dem Instrument 'Konzern' und seinen mannigfaltigen Spielarten neben dem Gesetz die Möglichkeit zu verschaffen, mehrere, bisher selbständige Unternehmen zu einer neuen wirtschaftlichen Einheit zusammenzufügen, ohne dabei die formelrechtliche Selbständigkeit der einzelnen Wieder aufgeben zu müssen."

work.[270] In practice, shareholders in general meeting were incapable of managing the company. Since the general meeting was not a permanent body, it could not take care of the interests of the company on a continuous basis. Shareholders that came and went lacked the necessary knowledge and skills to take decisions in the interests of the company. If the number of shareholders was large, it was difficult to call a meeting and facilitate a good process for decision-making at the meeting.[271] Moreover, shareholders were not regarded as the right people to run the company. Shareholders acted in their own private interests, different shareholders had different private interests,[272] and shareholders could also choose to remain passive.[273]

These aspects influenced the German reforms of 1870 and 1884 that – through the lens of modern theory – can be said to have facilitated the self-governance of the firm through the self-enforcement of its organisation and a self-enforcing governance model. Design principles that facilitate a self-enforcing governance model do not primarily rely on external monitoring inputs other than monitoring by customers and the general monitoring of legal and regulatory compliance.[274]

270 Fischer CE (1955) p 86: "Ein erwerbswirtschaftliches Unternehmen in AG-Form ist kein 'Staat im Kleinen', der mit der Führung der Geschäfte beauftragte Vorstand ist keine 'Staatsregierung' und die Hauptversammlung der, 'Aktionäre' genannten, Eigentümer des Unternehmens ist kein 'Parlament'." Generally, see Teubner G (2014). For shareholder voting rights as a proxy for "democracy", see Dunlavy CA (1998).

271 Renaud A (1875) § 50 pp 458–459: "Das einfachste und natürlichste Organ der Actiengesellschaft ist nun die Generalversammlung oder Actionäre, wie dies in der Gemeinde die Gemeindeversammlung, in der Markgenossenschaft das Märkeding ist. Jene Versammlung ist auch das höchste Organ der Actienverbindung, dasjenige, dessen Beschlüsse als der unmittelbarste Ausdruck des Corporations-Willens gelten. Dessenungeachtet ist dieselbe ein unvollkommenes Organ, weil sie, indem ihr die Eigenschaft der Ständigkeit abgeht, ausser Stande ist, in fortgesetzter ununterbrochener Weise die Interessen des Vereins so wie der einzelnen Gesellschaftsmitglieder zu wahren, – weil sie ferner einem steten Wechsel in den Personen ihrer Theilnehmern ausgesetzt und dadurch so wie durch den möglichen Mangel an jeder Geschäftskenntniss bei der Mehrzahl derselben, endlich durch die Unbehülflichkeit einer möglicher Weise sehr zahlreichen Versammlung und die Schwierigkeit, sie zusammenzuberufen, zur Führung der Vereins-Geschäfte untauglich ist."

272 See Schnorr T (2000) p 19 on the situation after the German company law reform of 1870.

273 Fischer CE (1955) p 94. Ireland P (2018) points out that by the 1870s wealthier shareholders in the UK were beginning to delegate not only management of companies but management of their money to institutions.

274 Mäntysaari P (2012) Chapter 8. Maitland seems to have preferred more state control. Maitland FW (1913) pp xxi: "Really and truly the property of a corporation – for example a city or university – belongs to no real person or persons, and over the doings of guardians and curators the State should exercise, no mere jurisdiction, but administrative control."

The self-governance of the firm would not work without the existence of several corporate bodies or "organs" and the separation of functions between them (section 2.4.5).

Conclusion. The self-governance of the firm emerged as a design principle in continental Europe. It was connected to the organ theory and the separation of the functions of share ownership, monitoring, and management.

2.4.5 The Separation of Functions

To facilitate self-governance, it was necessary to separate powers and allocate them between different corporate bodies. The most important steps on this path were the French laws of 1856 and 1867 as well as the German ADHGB of 1861, 1870 and 1884 and finally the Aktiengesetz of 1937.

The separation of functions has, since ancient times, been a popular practice in the organisation of states, municipalities, the church, and other entities with many members. In fact, the separation of functions is as old as the existence of cities and central power. It spread to all kinds of institutions, including companies.[275] Early companies or self-contained organisations such as the VOC had participants with different functions (section 2.4.2). Partnerships and limited partnerships have partners with different functions. Adam Smith wrote about the difference between rentier "proprietors" and manager-directors.[276] In modern company law, the separation of functions is often achieved by using statutory

275 See, for example, Webber D (2018) p 111: "No single idea is more closely associated with the founders of the American republic than the concept of checks and balances. Because the framers believed that too much power vested in one person would inevitably lead to tyranny, they separated the powers of government into three distinct branches … That insight has since spread from debates over government to all kinds of institutions, including corporations." For the division of labour generally, see Smith A (1776) Book I, Chapter 1: "The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour."

276 Smith A (1776) Book V, Chapter 1, Part 3: "The trade of a joint stock company is always managed by a court of directors. This court, indeed, is frequently subject, in many respects, to the control of a general court of proprietors. But the proprietors seldom pretend to understand anything of the business of the company, and when the spirit of faction happens not to prevail among them, give themselves no trouble about it, but receive contentedly such half-yearly or yearly dividend as the directors think proper to make to them."

bodies such as the board (section 2.4.10). The separation of functions is one of the key components under a self-enforcing governance model (section 2.3.3).[277]

This said, it was not until the nineteenth century that the separation of functions gradually developed as a fundamental design principle for limited-liability companies. Many alternatives were tested in France. German law built on French experiences but reached a new level in 1884 with the separation of functions between different corporate bodies and between shareholders and managers.

French law. The Code de commerce of 1807 did not yet introduce any clear separation of functions between shareholders and managers for the governance of limited-liability companies (sociétés anonyme). The main focus was on the various degrees of the limited liability of shareholders rather than on the allocation of power in the company. In a partnership (société en nom collectif), each partner could act on behalf of the company. In a limited partnership (société en commandite), only the unlimited partner or partners could do so. In a limited-liability company (société anonyme), a shareholder could not act on behalf of the company in dealings with third parties in the capacity of a shareholder but could do so in the capacity of a mandatary (mandataire). The company was managed by mandataries that could be shareholders.[278]

The separation of functions nevertheless started to develop in French company law practice, in particular in the practice of limited partnerships (sociétés en commandite). In the first half of the nineteenth century, the simple limited partnership (société en commandite simple) was complemented by two kinds of limited partnerships with shares (sociétés en commandite par actions nominatives, sociétés en commandite par actions au porteur).[279] Many limited partnerships with bearer shares used a supervisory committee (conseil de surveillance) for monitoring purposes. Lamoreaux and Rosenthal have described this practice as follows: "The conseils could range in size from three to seven members; their meetings could occur quarterly or be as frequent as once a week; their powers could be limited to auditing the books; their approval could be required to sell assets and/or incur debts."[280]

After cases of abuse during the boom of the 1850s, these practices ultimately led to the regulation of limited partnerships with shares. According to Lamor-

277 Mäntysaari P (2012) Chapter 8.

278 Article 31 of the Code de commerce (1807): "Elle est administrée par des mandataires à temps révocables, associés ou non associés, salariés ou gratuits."

279 For the number of different company forms founded between 1847 and 1860, see the table in Dougui N (1981) p 272, citing A. Moulard, Des sociétés commerciales en France, Revue contemporaine, February 1863, p 530.

280 Lamoreaux NR, Rosenthal JL (2005) p 41 footnote 6.

eaux and Rosenthal, legislators sought to balance two contradictory goals: "On the one hand, they aimed to keep limited partners out of the day-to-day affairs of the firm. On the other, they did not wish to give insiders (the managing partners and members of the conseil) unrestricted power to do as they pleased."[281]

The French law of 1856[282] therefore made the creation of a conseil de surveillance (monitoring council) mandatory for a limited partnership with shares. The conseil consisted of at least five shareholders[283] and contributed to the separation of functions in four main ways. First, members of the conseil had a right and duty to verify the books and assets of the company.[284] When Rivière described the contents of this duty in his commentary of the law of 1856, he pointed out that the committee was supposed to present the numbers but leave value judgments to the general meeting.[285] Second, the conseil could call the general meeting. It could even ask for the dissolution of the company.[286] Third, members of the conseil had no right to manage the company or represent the company in their capacity as conseil members.[287] Fourth, duties were complemented by sanctions for breach of duty.[288]

The role of the conseil de surveillance depended on the company and ranged from a communication device between managers and shareholders to a body

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281 *Ibid.*, p 41.

282 La loi du 17 juillet 1856, relative aux Sociétés en commandite par actions.

283 Article V of the law of 1856: "Un conseil de surveillance, composé de cinq actionnaires au moins, est établi dans chaque société en commandite par actions …"

284 Article VIII of the law of 1856: "Les membres du conseil de surveillance vérifient les livres, la caisse, le portefeuille et les valeurs de la société.

Ils font, chaque année, un rapport à l'assemblée générale sur les inventaires et sur les propositions de distribution de dividendes faites par le gérant."

285 See Rivière HF (1857) pp 58 – 59 numbers 83 – 88.

286 Article IX of the law of 1856: "Le conseil de surveillance peut convoquer l'assemblée générale. Peut aussi provoquer la dissolution e la société."

287 Rivière HF (1857) p 59 number 86: "Les conseils de surveillance, nous l'avons déjà dit, ont pour mission de veiller à ce que les conventions sociales reçoivent une loyale exécution. Mais ils doivent s'abstenir de s'immiscer dans la gestion des affaires de la société. Ils ne peuvent participer aux actes extérieurs et patents, entraver le gérant en lui traçant la marche qu'il doit suivre, en prenant part à ses opérations, en lui demandant compte de ses projets, de ses relations, de ses secrets de fabrication."

288 Articles VII and X of the law of 1856. Rivière HF (1857) p 62 nr 98: "En un mot, et comme l'a dit M. rapporteur Langlais, la loi ne punit pas la simple ignorance, la simple négligence; c'est la science, c'est la mauvaise intention, c'est le dol."

that resembled a board of directors whose approval was required for important decisions.[289]

The conseil de surveillance was an interesting step. However, it did not work, because shareholders were unwilling to serve on such committees due to the risk of personal liability.[290] French law had to try something else.

In 1867, the regulation of limited-liability companies (sociétés anonyme) took a further step towards the separation of functions. The French law of 24 July 1867[291] distinguished between ordinary and extraordinary general meetings of shareholders (assemblées générale), administrators (administrateurs), a director (directeur), mandataries (mandataires), and commissioners (commissaires). The administrators were regarded as mandataries. There could be external mandataries as well.[292]

The law of 1867 was based on the principle that all powers that were not specifically allocated to the general meeting of shareholders were vested in specialist bodies.[293] However, the separation of functions remained rather limited as the administrators/mandataries were shareholders and the mandataries appointed one of their number to act as a director.

Like the law of 1863 that predeced it,[294] the law of 1867 required "commissaires", that is, audit committees consisting of shareholders elected by shareholders.[295] Commissaires were deemed necessary as it had turned out that the general

289 See Lamoreaux NR, Rosenthal JL (2005) pp 40 – 41: "… The latter role became more common over time, especially after an 1856 law made the creation of a conseil mandatory …"
290 See *ibid.*, p 41.
291 Loi du 24 juillet 1867 sur les sociétés commerciales.
292 Article 22 of the law of 1867: "Les sociétés anonymes sont administrées par un ou plusieurs mandataires à temps, révocables, salariés ou gratuits, pris parmi les associés.

Ces mandataires peuvent choisir parmi eux un directeur, ou, si les statuts le permettent, se substituer un mandataire étranger à la société, et dont ils sont responsable envers elle."
293 Le Cannu P, Dondero B (2014) number 681: "Avant 1867, un système pyramidal s'articulait grâce aux mandats donnés par les actionnaires au conseil d'administration et par celui-ci à l'administrateur délégué. Ce système a été progressivement remplacé (lois de 1867, 1940, 1943, 1966, ordonnance de 1969) par une répartition légale des tâches, où l'assemblée des actionnaires voit son rôle cantonné à certaines décisions, certes importantes. Les textes les plus récents n'ont pas rompu avec cette philosophie, bien au contraire. Toutes les fonctions qui ne sont pas réservées aux assemblées d'actionnaires (ordinaire ou extraordinaire) sont attribuées à des organes spécialisés."
294 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée. For commissaires, see articles 15 – 17.
295 Article 32 of the law of 24 July 1867; Kuhn AK (1912) p 118: "A salutary check upon the board of directors has been instituted by the Law of 1867, in its provision that no resolution of the gen-

meeting was unable to monitor management in any rational way.[296] At the same time, the law of 1867 absolved those who served on audit committees of personal liability for the company's obligations.[297] The efficiency of this form of control was hampered by the legal requirement that the commissaires were shareholders and "the practice in France to consider the auditor as a candidate for future election to the directorate".[298]

The French law of 1867 had not yet made joint liability mandatory.[299] While French law seemingly required compliance with certain standards,[300] the standards were not enforced in fact in the absence of both the separation of functions and an efficient monitoring and enforcement mechanism.[301]

The governance model of the modern société anonyme has been described as a pyramid structure since its corporate bodies have different functions.[302] However, the law of 1867 did not yet create a clear separation of functions. The separation of functions was clarified 99 years later by the law of 1966 that borrowed from German law.[303]

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eral meeting approving the balance sheet and accounts shall be valid unless preceded by a report of the auditors."

296 Schäffle A (1865) pp 252–253: "Das Gesez geht bei dieser Schöpfung von der hundertfältigen Erfahrung aus, dass die Generalversammlungen ohne eigenes Organ eine jedes vernünftigen Willens entbehrende, bald factiöse, bald dupirte Heerde ist."

297 Lamoreaux NR, Rosenthal JL (2005) p 41.

298 Kuhn AK (1912) pp 121–122.

299 Article 44 of the law of 1867: "Les administrateurs sont responsables, conformément aux règles du droit commun, individuellement ou solidairement, suivant les cas, envers la société ou envers les tiers, soit des infractions aux dispositions de la présente loi, soit des fautes qu'ils auraient commises dans leurs gestion, notamment en distribuant ou en laissant distribuer sans opposition des dividendes fictifs." Kuhn AK (1912) pp 116–118: "For breach of the fiduciary obligations of a director, the law provides for either an individual or a joint and several liability, as the case may be, according to whether the act was performed with or without the concurrence of other directors."

300 Kuhn AK (1912) pp 116–118: "As they are declared to be mandataries, it follows that the provisions of the Civil Code apply. They are therefore held responsible not only for fraud (dol), but also for errors (fates) committed by them as such; except that mandataries serving without compensation are subjected to a less rigorous test of responsibility than those who are compensated." See article 1992 of the Code civil.

301 See *ibid.*, pp 116–118 and 120–122.

302 Le Cannu P, Dondero B (2014) number 681.

303 See Rawlings BM (1975) p 1251: "A law of July 24, 1966, has brought about a fundamental revision of the French Company Law for the first time in ninety-nine years … [The 1966 law] represents a major statute involving some important departures from past law and practice. Principal among these is the introduction into the 'société anonyme,' or corporation of a new form of management. Borrowed from German law, this form of management involves a supervisory

German law. The German company law reform of 1870[304] built on the emerging French design principle of the separation of functions.[305] A better separation of functions was achieved gradually in 1870 and 1884 by using board structures and reducing the role of shareholders in management and monitoring. The German reform of 1884 reflected what was happening in the economy in general. The growth of markets and firms had contributed to increased demand for professional managers.

The supervisory board (Aufsichtsrat) was introduced by the ADHGB of 1861 as an optional body that complemented the management board (Vorstand).[306] The reform of 1870 made both the management board (Vorstand) and the supervisory board (Aufsichtsrat) mandatory in a limited-liability company (Aktiengesellschaft).[307] The management board was designed to work as a permanent management body that represented the company in its internal and external dealings.[308] The function of the supervisory board was to monitor management on a continuous basis.[309] These bodies were organs of the company designed to

board ('Conseil de Surveillance') and directorate ('Directoire'). An alternative is thus provided to the traditional Société anonyme management by a board of directors ('Conseil d'Administration') and president ('Président')."

304 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften. Vom 11. Juni 1870.

305 Ducouloux-Favard C (1992) p 859; Hopt KJ (2019b) p 510.

306 Article 225 of ADHGB 1861.

307 Article 209 of ADHGB 1870: "Der Gesellschaftsvertrag muß insbesondere bestimmen: … 6) die Bestellung eines Aufsichtsrathes von mindestens drei, aus der Zahl der Aktionaire zu wählenden Mitgliedern; … 8) die Art der Bestellung und Zusammensetzung des Vorstandes und die Formen für die Legitimation der Mitglieder desselben und der Beamten der Gesellschaft; … "

308 See Renaud A (1875) § 50 pp 458 – 459: "Diese Unvollkommenheit des Organs der Generalversammlung und das mit deren Unständigkeit gegebene Erforderniss einer Zusammberufung derselben, so oft deren Beschussfassung als nöthig oder zweckmässig erscheint, erfordern mit Nothwendigkeit ein anderweitiges Organ der Actiengesellschaft, welches, durch eine oder mehrere physische Personen gebildet, zugleich ein ständiges und nicht einem steten Wechsel der Mitglieder ausgesetztes ist."

309 Article 225a(1) of ADHGB 1870: "Der Aufsichtsrath überwacht die Geschäftsführung der Gesellschaft in allen Zweigen der Verwaltung; er kann sich von dem Gange der Angelegenheiten der Gesellschaft unterrichten, die Bücher und Schriften derselben jederzeit einsehen und den Bestand der Gesellschaftskasse untersuchen." Renaud A (1875) § 50 pp 458 – 459: "Namentlich hat bei grösseren Actiengesellschaften die Unbeholfenheit der Generalversammlung, die Schwierigkeit und Langwierigkeit der Berufung einer solchen, zur Aufstellung eines weiteren Organs (eines Aufsichtsraths) geführt, welchem, indem es eine Mittelstufe zwischen dieser und dem Vorstande bildet, eine Reihe der derselben an sich zukommenden Attribute überwiesen worden sind. – Das Allg. deutsche Handelsgesetzbuch verlangt, wie bereits gezeigt wurde, einen Aufsichtsrath bei jeder Actiengesellschaft."

benefit the company directly. They were neither bodies nor representatives of shareholders. Shareholders could nevertheless benefit indirectly.[310]

Since the reform of 1870, a German limited-liability company has had a management board (Vorstand) to represent the company internally (in its dealings with company insiders) and externally (in its dealings with company outsiders).[311] The management board is the most important corporate body in Germany.[312]

The supervisory board (Aufsichtsrat) was made mandatory to ensure the effective monitoring of management. The supervisory board and self-governance were designed to replace state monitoring[313] and inadequate monitoring by shareholders.

However, the separation of monitoring and management did not immediately materialise the way the German legislators had intended. The supervisory board continued to participate in management. It was necessary to achieve a fuller separation of the powers of the management board and the supervisory board.[314]

Moreover, the reform of 1870 still required members of the supervisory board to be elected from the pool of shareholders. This reflected French company law, according to which only a shareholder could act as a director (directeur)[315] or, in a partnership limited by shares (société en commandite par actions), as a member of the monitoring council (conseil de surveillance).[316] In Germany, it was soon understood that this requirement was a mistake. The mistake was corrected in the reform of 1884 (ADHGB 1884).

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310 Renaud A (1875) § 50 pp 458 – 459: "Die angedeuteten Organe sind aber Organe des Actienvereins und nicht der Actionäre, obwohl sie durch die gehörige Ausübung der ihnen obliegenden Thätigkeit mittelbar die Interessen dieser letzteren wahren."

311 Article 227 and Article 209, number 7 of ADHGB 1870.

312 Fischer CE (1955) pp 107 – 108: "So brachte auch hier die Neufassung des Aktiengesetzes von 1937 nur eine formelle Legalisierung der bereits seit einiger Zeit durchgängig bestehenden Verhältnisse in der Praxis, als die neuen Vorschriften der §§ 70 – 85 den Vorstand an Stelle der Aktionärversammlung materiell zum obersten Organ der AG erhoben und als in Abs III des neuen § 101 nun der Gesetzgeber auch offiziell erkannte, daß Konzerninteressen im Sinne des § 101 als 'schutzwürdige Belange' anzusehen seien, die gegebenenfalls den Gesamtinteressen einer abhängigen AG – also auch den Interessen der am Gesamtkonzern gar nicht beteiligten außenstehenden Minderheitsaktionäre – übergeordnet werden dürften."

313 See von Hein J (2008) p 85: "Die Verfasser der Aktienrechtsnovelle ließen sich dabei bei der Erwägung leiten, dass eine zwingende Einrichtung des Aufsichtsrates bei der Aktiengesellschaft eine notwendige Kompensation für den Wegfall der Staatsaufsicht sei."

314 See Schnorr T (2000) p 22; von Hein J (2008) p 93.

315 Article 22 of the law of 1867. See Kuhn AK (1912) pp 116 – 118.

316 Article 5 of the law of 1867.

The reform of 1884 addressed problems relating to the composition of the supervisory board as well as its unclear functions and duties. The supervisory board was to be turned into a proper controlling body.[317] This was to be achieved by the following mandatory provisions of law.

First, an Aktiengesellschaft must have a management board (Vorstand) and a supervisory board (Aufsichtsrat).[318] This facilitated a two-tier board structure. Since the company law reform of 1937, the supervisory board is prohibited from taking management functions.[319]

Second, no person was allowed to be member of both boards at the same time.[320]

Third, the power to represent the company was vested in the management board.[321] The management board could empower other people to participate in the management and representation of the company.[322]

Fourth, the supervisory board had a duty to monitor the management board.[323] Many steps were taken to improve the previously low quality of monitoring.[324] To keep the functions of the boards separate, the supervisory board did not monitor management as such.[325] This helped to address the problem that monitoring is an integral part of management. Generally, the members of the supervisory board were not allowed to manage the company.[326] Neither were they permitted to delegate their functions.[327] To improve monitoring, members of the supervisory board did not have to be shareholders. Much later, monitoring was improved by appointing employee representatives to the supervisory board under co-determination laws adopted in 1951 and 1976.[328]

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317 Amtliche Begründung des Entwurfs eines Gesetzes, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften vom 7. März 1884, Aktenstück Nr. 21. See Lutter M (2007) p 392.

318 Article 209f of ADHGB 1884.

319 See Hopt KJ (2018) p 271.

320 Article 225a of ADHGB 1884.

321 Articles 227 and 230 of ADHGB 1884.

322 Article 235 of ADHGB 1884.

323 Article 225 of ADHGB 1884.

324 See Lutter M (2007) p 392.

325 This was a change. See Article 225a of ADHGB 1870: “Der Aufsichtsrath überwacht die Geschäftsführung der Gesellschaft in allen Zweigen der Verwaltung …”

326 Article 225a of ADHGB 1884.

327 Article 225(4) of ADHGB 1884.

328 Lutter M (2007) p 392.

Fifth, each member of the management board and the supervisory board had a duty to observe certain minimum standards. In particular, each member had a duty act as "a diligent businessman" and owed a duty of care to the company.[329]

Sixth, the nature of the management board as a collegiate organ was enhanced by providing for the joint liability of its members.[330] Similar rules were applicable to the supervisory board.[331] This gave each management board member and each supervisory board member an incentive to monitor other board members and reason to adapt one's own behaviour because of monitoring by peers.

The management board reflected the rise of professional management. The efficiency of monitoring was increased by a two-tier board structure that facilitated the independence of the monitoring function. Vertical supervision was complemented by horizontal peer-to-peer monitoring. The fact that monitors were not limited to shareholders facilitated mixed monitoring. One may note that the "independence" of individual board members was irrelevant for the functioning of monitoring.

What this reform meant was that most shareholders were, for efficiency reasons and to achieve the benefits of specialisation, effectively removed from the management and monitoring of the company. The two-tier board structure was instrumental in achieving the separation of share ownership and management. While a shareholder was still regarded as the owner of a share of the assets of the company,[332] shareholders had only very limited rights to the assets of the company during the life of the company.[333] Shareholders did vote on the distribution of profits, but the management board could dilute it by using "stille Reserven" (section 2.4.8) or "silent reserves" (and the right of shareholders to decide on the distribution of profits was taken from them in the company law reform of 1937).[334] Minority or non-controlling shareholders were protected by

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329 Article 241(2) of ADHGB 1884 on management board members and Article 226(1) of ADHGB 1884 on supervisory board members.

330 Article 241(3) of ADHGB 1884.

331 Article 226(2) of ADHGB 1884.

332 Article 216(1) of ADHGB 1884: "Jeder Aktionär hat einen verhältnißmäßigen Antheil an dem Vermögen der Gesellschaft."

333 Article 216(2) of ADHGB 1884.

334 Fischer CE (1955) p 99: "Bemerkenswert ist auch folgendes: Zu den Zeiten, als noch das alte Aktienrecht von 1870/1884/1931 für die Feststellung des Jahresabschlusses und die Entscheidung über die zu verteilende Dividende die Zuständigkeit der Generalversammlung, also der Gesamtheit der Aktionäre, vorsah, war die stille Reservenpolitik von seiten der Aktienverwaltungen in der Öffentlichkeit mit dem Schutzbedürfnis des Unternehmens vor dem wirtschaftlichen Unverstand und dem 'Dividendenhunger' der Aktionäre begründet worden. Mit der Aktienrechtsre-

the framework of mandatory provisions of company law and the separation of powers between corporate bodies. In other words, the combination of these two aspects was a way to increase equity investment.[335]

The German reform of 1884 was a clear departure from the French law of 1867[336] that still built on the idea that a company should be managed by shareholders[337] and provided for a one-tier board.

This said, the composition of the supervisory board did not necessarily contribute to effective monitoring immediately after the reform of 1884. The role of the supervisory board was regarded as an issue (known as the "Aufsichtsratsfrage") for many years after the 1884 reform.[338] At the core of the issue seem to have been three problems: First, when supervisory board members still were appointed by the general meeting, the supervisory board was controlled by the majority shareholder or shareholders.[339] Second, the general meeting of shareholders had been defined as the highest corporate body since the ADHGB of 1861. According to the preparatory works of the 1884 reform, the general meeting still had the right to "adopt resolutions and make decisions in all matters touching at the essence of the corporation".[340] Third, the supervisory board could still be given management functions in the articles of association.[341]

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form vom 30. Januar 1937 wurde in § 125 dieses Mitgliedschaftsrecht den Aktionären genommen und dem Vorstand, gemeinsam mit dem Aufsichtsrat, übertragen. Trotzdem wurde die stille Reservenpolitik im gleichen Ausmaß weiter betrieben."

335 This has not always been understood in corporate governance discourse. See generally "LLSV" (Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny) and von Hein J (2008) p 98: "Der traditionell gering ausgeprägte Minderheitenschutz im deutschen Aktienrecht wird in der US-amerikanischen Literatur zur vergleichenden Corporate Governance vielfach als der entscheidende Erklärungsfaktor angesehen, weshalb sich in Deutschland im Vergleich zum angloamerikanischen Rechtskreis traditionell deutlich weniger Aktiengesellschaften im Streubesitz befinden." The role of mandatory provisions of law and the separation of powers in Nordic company law was recognised by Gilson RJ (2014).

336 Loi du 24 juillet 1867 sur les sociétés commerciales.

337 See Article 26 of the law of 1867.

338 See Schnorr T (2000) p 43; Kuntz T (2018); Hopt KJ, Roth M (2019) § 95 I.1.3 – 6 pp 16 – 18.

339 For a critical view, see Fischer CE (1955) p 110: "Grundsätzlich bestimmt die Mehrheit der in der Hauptversammlung vertretenen Stimmen die Zusammensetzung des Aufsichtsrats; nur in der Satzung können hiervon abweichende Regeln für die Wahlen zum Aufsichtsrat festgelegt werden." See also von Hein J (2008) p 85: "Auch im modernen Schrifttum wird dem Gesetzgeber des Jahres 1870 vorgeworfen, er habe nicht hinreichend bedacht, dass der Aufsichtsrat in der Ausgestaltung, die er in der ersten Aktierechtsnovelle erfahren hatte, zu einer problematischen Verdoppelung der Einflussquellen der Großaktionäre führe."

340 Kuntz T (2018).

341 Article 225(3) of ADHGB 1884: "Weitere Obliegenheiten des Aufsichtsraths werden durch den Gesellschaftsvertrag bestimmt."

If the supervisory board and the management board have the same functions, one of them becomes superfluous. Regulation influenced corporate practice.

The vague separation of powers finally changed in the 1937 reform. The Aktiengesetz of 1937 provided for a strict separation of power between the management board, the supervisory board, and shareholders. Moreover, it limited shareholder rights.

The supervisory board emerged as an important advisory body even in small and mid-sized AGs and AGs that were family firms.[342] This role was improved by the representation of banks in the supervisory board under the Hausbank model of German corporate governance. Banks used to act both as lenders and as important blockholders in large companies. The representation of banks increased mixed monitoring.

After the Second World War, mixed monitoring was further increased by the adoption of co-determination (Mitbestimmung) laws[343] that required part of the supervisory board members to be appointed by employees. Employee representatives that were company insiders were well-informed and had a long-term personal interest in the sustainability of the firm.[344] In contrast, employee representatives that were company outsiders such as representatives of labour unions were not as well-informed and did not have the same incentives.[345]

German banks came under strong pressure to divest their ownership stakes due to increased internationalisation of banking during the 1990s.[346] The erosion of the role of banks in German corporate governance and the declining supervisory board representation of German banks may have influenced the quality of the advisory and monitoring role of the supervisory board.[347]

In any case, the supervisory board has been an important monitoring body for a long time.[348] It is firmly established as a cornerstone of German corporate

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342 Hopt KJ (2019b) pp 512 and 523.

343 The first was the Montanmitbestimmungsgesetz of 1951.

344 For a critical view, see Fischer CE (1955) pp 112–113. For employees as the allies of board members, see Hopt KJ (2019b) p 513.

345 For a critical view, see Fischer CE (1955) p 114: "Das Institut des Aufsichtsrats ist durch die zwingend vorgeschriebene Erweiterung um Persönlichkeiten, die nicht von den Aktionären frei gewählt werden können, die z.T. sogar betriebsfremde Vertreter der Gewerkschaftsorganisationen sind, in seinem Wesen und hinsichtlich seiner Funktionen entscheidend verändert, im Hinblick auf seine Bedeutung im System des deutschen Aktienrechts völlig denaturiert."

346 See Ringe WG (2015).

347 Hopt KJ (2019b) p 512.

348 *Ibid.*, p 514.

governance and policy. The dual board model is reflected in the German Corporate Governance Code.[349]

After the adoption of the GmbH Act in 1892, a new form of limited-liability company made it possible for shareholders to set up tailor-made organisational structures in family firms or other privately-held firms (section 2.4.9).[350]

US law. After France and Germany, the separation of monitoring and management was to some extent adopted in the US. It was the outcome of economic forces.

As firms grew in size and share ownership structures became more dispersed over time, a new professional management class appeared. Professional managers focused on the firm and regarded shareholders as just a category of stakeholders.[351] Berle and Means described the separation of share ownership and management.[352] Chandler has described how professional managers and management became a source of power in the US.[353]

The separation of share ownership and management was increased by the corporate practice of vesting all powers in the board as well as by the irrevocable nature of the corporate charter (*Dartmouth College*). In the 1970s, the growing importance of management was complemented by the notion of the board as a monitoring board.[354]

349 Hopt KJ, Roth M (2019) § 95 I.1.7 p 18: "Die Regierungskommission Deutscher Corporate Governance Kodex hat den Verweis auf die Konvergenz von Aufsichtsrat- und Verwaltungssystem ... 2013 aus der Präambel des deutschen Kodex gestrichen und legt auch auf europäischer Ebene den Fokus verstärkt auf die Eigenheit des dualistischen Systems."

350 Fleischer H (2018b) pp 11–12.

351 See Keynes JM (1926) Chapter IV: "One of the most interesting and unnoticed developments of recent decades has been the tendency of big enterprise to socialise itself. A point arrives in the growth of a big institution – particularly a big railway or big public utility enterprise, but also a big bank or a big insurance company – at which the owners of the capital, i. e. its shareholders, are almost entirely dissociated from the management, with the result that the direct personal interest of the latter in the making of great profit becomes quite secondary. When this stage is reached, the general stability and reputation of the institution are the more considered by the management than the maximum of profit for the shareholders. The shareholders must be satisfied by conventionally adequate dividends; but once this is secured, the direct interest of the management often consists in avoiding criticism from the public and from the customers of the concern. This is particularly the case if their great size or semi-monopolistic position renders them conspicuous in the public eye and vulnerable to public attack."

352 Berle AA, Means GC (1932); Fanto JA (1998a) pp 37–38.

353 Chandler AD (1977) pp 6–11. Chandler uses eight propositions to show how and why the visible hand of management replaced what Adam Smith referred to as invisible hand of the market forces.

354 Eisenberg MA (1976).

However, the separation of monitoring and management in large public US companies has not yet reached the German level. The CEO serves as chairman of the board in many public companies.[355] The share of S&P 500 companies with a CEO chairman is getting smaller, but 50% of such companies still had a CEO chairman in 2018.[356]

In the absence of a two-tier board structure that separates monitoring and management, two-tier structures have been built inside the board by using committees and so-called "independent" non-executive directors. Such practices have had a different function in France and Germany that have relied on structural measures rather than the hypothetical frame of mind of certain individual board members.[357] In the US, the use of "independent" non-executive directors has not just been a way to improve monitoring in a one-tier board. It has also been a way to transfer power from executives to institutional shareholders.[358]

The SEC had encouraged the use of audit committees composed of independent directors as early as 1940.[359] The later adoption of rules on committees and independent directors in the 1990s was described by Macey and O'Hara. In March 1997, the SEC approved "a new NYSE rule requiring all listed domestic companies to establish and maintain audit committees independent from management and whose members were free from any relationship that would interfere with the exercise of their independent judgment". The NYSE and Nasdaq then agreed to sponsor a "blue ribbon panel" to make recommendations on strengthening the role of audit committees in overseeing the corporate financial reporting process. Recommendations in the panel's report "were coordinately proposed as rules by the NYSE, the Nasdaq, and the AMEX, and subsequently approved en masse on December 21, 1999, by the SEC under the Commission's

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355 Webber D (2018) pp 112–113.

356 Spencer Stuart (2018); Webber D (2018) p 113.

357 See, for example, Mäntysaari P (2005) pp 394–395.

358 See, for example, Fanto JA (1998a) p 54: "Much corporate legal (and other) scholarship in the last three decades suggests ways to minimize the passivity of boards of directors functioning in market capitalism and to make boards more responsive to shareholder interests. One reform, which has now become a reality in many Anglo-American jurisdictions, mandates that the majority of directors be 'outside' directors, individuals not drawn from management." The Business Roundtable endorsed shareholder primacy in its September 1997 Statement on Corporate Governance.

359 See SEC Release Nos. 33–8220, 34–47654 (Apr. 9, 2002) (Standards Relating to Listed Company Audit Committees), II.A.1.

statutory authority pursuant to Exchange Act Section 19(b)".[360] At the federal level, the Sarbanes–Oxley Act of 2002 (SOX) requires audit committees consisting of independent members. Stock exchange listing standards require that boards of listed companies have a majority of independent directors.[361]

The absence of a clear separation between monitoring and management at board level in the US can be illustrated with the board of directors of Long-Term Stock Exchange, Inc. as described by the SEC in 2019:[362] "The board of directors of LTSE ('Exchange Board') will be its governing body and will possess all of the powers necessary for the management of its business and affairs, including governance of LTSE as a self-regulatory organization ('SRO').[363] Pursuant to the LTSE Bylaws: · the Exchange Board initially will be composed of 6 or more directors;[364] · one director will be the Chief Executive Officer of LTSE; · the number of Non-Industry Directors, including at least one Independent Director, will equal or exceed the sum of the Industry Directors and Member Representative Directors; and · at least 20 % of the directors on the Exchange Board will be Member Representative Directors."[365] One can again see that two-tier structures are created by the use of committees.[366]

UK management practices. There was a fundamental difference between US or German firms on one hand and UK firms on the other in the early twentieth century.

Before the First World War, the UK's share of global industrial production collapsed from 32% in 1870 to 14% in 1913, whereas the share of the US in-

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360 Macey JR, O'Hara M (2005) p 577, citing the SEC's Press Release, NYSE & NASD, SEC, NYSE and NASD Announce Blue Ribbon Panel To Improve Corporate Audit Committees (Sept. 28, 1998).

361 Section 10 A(m)(1) of the Securities Exchange Act of 1934, as added by Section 301 of the Sarbanes-Oxley Act of 2002; SEC Release Nos. 33 – 8220, 34 – 47654 (Apr. 9, 2002) (Standards Relating to Listed Company Audit Committees); Bebchuk LA, Hamdani A (2017) p 1281, citing Developments in the Law—Corporations and Society (2004) p 2187: "The revised listing standards of both the NYSE and NASDAQ … require (with a few exceptions) that listed-company boards have a majority of independent directors …"

362 SEC Release No. 34 – 85828 (May 10, 2019), III.A.1.

363 The Bylaws of Long-term Stock Exchange, Inc., Section 3.1(a).

364 The Bylaws of Long-term Stock Exchange, Inc., Section 3.2(a).

365 The Bylaws of Long-term Stock Exchange, Inc., Section 3.2(b).

366 Mäntysaari P (2005) pp 399 – 401; SEC Release No. 34 – 85828 (May 10, 2019), III.A.3: "LTSE has proposed to establish several committees of the Exchange Board … Specifically, LTSE has proposed to establish the following committees of the Exchange Board: an Audit Committee, an Appeals Committee, and a Regulatory Oversight Committee, as well as a Compensation Committee. In addition, LTSE has proposed to establish a Nominating Committee and a Member Nominating Committee …"

creased from 23 % in 1870 to 36 % in 1913 and the share of Germany from 13 % in 1870 to 16 % in 1913. According to Chandler, the growth of industrial production in the US and Germany was partly caused by organisational capabilities: "Such organizational capabilities provided a dynamic for growth that helped to make the economies of the United States and Germany, in the three decades before World War I, the most productive and most competitive in the world."[367] The same organisational capabilities helped Germany to recover after World War I and World War II. After the Second World War, such organisational capabilities "became even more central to the competitiveness of enterprises, industries, and economies, as expansion into new geographical and product markets became the primary routes to growth for the modern industrial enterprise, and as such multinational and inter-industry expansion intensified competition in many markets".[368]

According to Chandler, UK firms continued to lose market share between the two world wars due to lack of organisational capabilities.[369] Many UK industrial firms remained "personally managed" family-controlled enterprises. Until well after the Second World War, entrepreneurs and their heirs "continued to play a larger role in the making of middle- and top-management decisions".[370] There were "far fewer hierarchical enterprises in the capital-intensive industries in Britain than there were in the United States" or Germany.[371]

The quality of British management practices was reduced by the insufficient separation of functions and the weight of the British class society. For example, "selection to senior positions and to the board depended as much on personal ties as on managerial competence ... Not only were fewer senior managers placed on boards as inside directors than was the case in the United States and Germany, but outside directors were selected as much for family connections and social position as for industrial experience."[372] Moreover, the development of British organisational capabilities "was held back not only by less vigorous competition between firms but also by the desires of the founders and their families to retain control ... [T]he smaller number of top executives in British firms usually meant that they had to concentrate on day-to-day operations to the detriment of long-term planning and growth."[373] The controlling shareholders and families fav-

367 Chandler AD (1990) pp 595 – 596.
368 *Ibid.*, p 596.
369 *Ibid.*, p 596.
370 *Ibid.*, p 240.
371 *Ibid.*, p 242.
372 *Ibid.*, p 242.
373 *Ibid.*, p 335.

oured “current dividends over long-term growth”.[374] They were not the only ones. New groups of investors that were not interested in any particular company as such preferred small investments returning a regular income.[375]

This may have had long-term effects especially in industries that rely on long-term investment. In 2018, manufacturing’s share of value added was mere 9 % of GDP in the UK. In Germany, manufacturing’s share was 21 %.[376]

The separation of functions in investment fund practice. The role of market investors has changed in investment fund practice (section 5.3).[377] Since fund investors are not shareholders of portfolio companies, they have no rights whatsoever in portfolio companies. In the fund, their control rights are radically limited. The fund is managed by a management company that controls investments made by the fund. This means that there is a separation of capital investment (by market investors into the fund), share ownership (in portfolio companies), and control (by the fund management company).[378] While fund management companies may advocate increased shareholder rights in their portfolio companies, they accept no such thing for the funds that they manage.

An investment fund could be seen as a firm with contract-based or legal powers vested in outsourced management and hardly any powers vested in external capital investors: “in terms of their rights and risks, fund investors look more like buyers of products or services than like investors in ordinary companies”.[379] Investment funds have been very successful in attracting investors and capital.

Conclusion. The separation of share ownership, monitoring, and management is beneficial for long-term corporate success in large companies.

In the nineteenth century, it turned out that shareholders could neither manage the company nor monitor management. Germany was the first country to separate share ownership, monitoring, and management in a company law statute in 1884. The US achieved the separation of share ownership and management in corporate practice. Both countries prospered and increased their share of global markets in the late nineteenth and early twentieth centuries thanks to professional management and organisational capabilities.[380] The UK lagged

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374 *Ibid*., pp 594–595.
375 Ireland P (2018); Edwards JR (2019) pp 32–33 citing Jefferys JB (1938).
376 World Bank national accounts data.
377 Gilson RJ (2003) on venture capital. Morley J (2014) and Ferrell A, Morley JD (2018) on investment funds.
378 Morley J (2014) pp 1234 and 1238.
379 *Ibid*., p 1233.
380 Chandler AD (1990) p 394.

behind the US and Germany in the separation of corporate functions and corporate success in the twentieth century.[381]

In investment fund practice, there is separation of capital investment (into the fund), share ownership (in portfolio companies), and control (by a fund management company). Market investors have traded control rights for exit rights. This has contributed to the growth of fund investment and increased the size and profits of fund management firms. Fund management firms and their shareholders have benefited from the assets of fund investors (volume-based fees) and the assets of portfolio companies (result-based fees).

The separation of functions took a different turn in start-up and venture capital practice. In start-ups and growth firms, founders or entrepreneurs are the key managers. The standard corporate structure may just be the legal front.[382] The personal qualities of the key people are far more important for the early survival and growth of the firm.[383] In venture capital practice, venture capital firms act as gatekeepers to funding from venture capital funds. Moreover, the managers of venture capital firms provide valuable ancillary services to portfolio companies.

The separation of functions should be complemented by a common goal. The outcome of corporate management and board work will depend on the goal (sections 2.4.13 and 2.4.16). For example, increasing financialisation in the US contributed to monitoring and management in the interests of shareholders and reduced the global competitiveness of many traditional US firms. In 2017, manufacturing's share was just 11% of value-added in the US.[384] Unlike traditional US firms, big tech has focused on technology and growth instead. In 2020, five US tech companies accounted for more than one fifth of the value of the S&P 500. Their success has influenced much of tech start-up and venture capital practice.

2.4.6 Auditing

German company law and English company law were on different paths in the late nineteenth century.[385] While German company law relied on the separation

381 *Ibid.*, pp 393–394.
382 See, for example, Mäntysaari P (2005) pp 32–33 on legal fronts in corporate governance.
383 See, for example, "Letter from the Founders" in Google, Inc, S-1 registration statement, 18 August 2004.
384 World Bank national accounts data.
385 For example, this was criticised by Passow R (1909) p 52: "Ist es nicht mindestens sehr wahrscheinlich, daß, wenn das Handelsgesetzbuch [von 1861] ... von einen Verwaltungsrat ge-

of the functions of management and monitoring at board level, English company law relied more on publicity. There can be many forms of publicity.[386] The introduction of free incorporation in the nineteenth century led to registration obligations.[387] English company law with its unitary board model developed auditing as a way to monitor management. In the US, public disclosures and the market for corporate control (exit) emerged as important corporate governance tools.[388] The development of auditing requirements preceded the development accounting standards (section 2.4.8). We can have a look at auditing.

English law. The use of independent auditing was pioneered in England and Ireland.[389] Audit activities became more important in the second half of the nineteenth century as the number of limited-liability companies grew and more shareholders were separated from management.[390] At the end of the nineteenth century, the general standard of work expected from auditors was still rather low. Auditors were expected to detect fraud and errors.[391]

The origins of the English independent audit requirement can be traced to the eighteenth century. The Governor and Company of Mine Adventures of England had run heavily into debt. The 1711 Act for the Relief of the Creditors and Proprietor of the Company of Mine-Adventurers required the senior officers to make annually "a true state or representation of the affairs and condition" of the company and "to state, make up and balance the accounts". The directors were empowered to appoint "one or more honest and able accountant or accountants ... to well and truly according to the best of his or their skill examine

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sprochen hätte, daß dann die Aktiennovelle von 1870 gar nicht darauf verfallen wäre, aus diesem Verwaltungsrat der Aktiengesellschaft plötzlich einen Aufsichtsrat zu machen? Ist nicht anzunehmen, daß man dann in Übereinstimmung mit der Gesetzgebung Frankreichs und Englands ... neben den an der Verwaltung beteiligten Organen besondere Revisoren, Kommissare oder auch ein besonderes ständiges Kontrollgremium geschaffen hätte?" Cited in von Hein J (2008) p 85.

386 See Merkt H (2001) p 6: "Der Begriff der Publizität is mehrdeutig." *Ibid.*, p 9: "Zu unterscheiden ist ... die Unterrichtung breiter Adressatenkreise durch Einzelauskunft von der Publizität."

387 *Ibid.*, p 53 citing Renaud (first edition 1863). See Renaud A (1875) § 34.

388 See already Brandeis LD (1913). For the market for corporate control, see Manne HG (1965). For the central role of the market for corporate control in US company law discourse, see Macey JR, Miller GP (1995–1996).

389 Quick R (2004) p 283: "Vorreiter bei der Schaffung unabhängiger Institutionen zur Überprüfung der Rechnungslegung waren Großbritannien und Irland." Citing Raschenberger M (1929) p 17.

390 See Edwards JR (2019) pp 32–33 citing Jefferys JB (1938).

391 In re London and General Bank [1895] 1 Ch 331. In re Kingston Cotton Mill (No 2) [1896] 2 Ch 279.

the books, deeds and papers and accounts [of the] company and to see if the said accounts are fairly and regularly entered and just made up and properly vouched and to fairly and impartially lay before the next general meeting of the company ... the true state of the company's accounts".[392]

In the nineteenth century, it was generally accepted that there should be an orderly and standardised system of accounting and an independent review of accounts.[393] The Joint Stock Companies Act of 1844 provided, first, that "Directors shall cause the Books of the Company to be balanced, and a full and fair Balance Sheet to be made up" and, second, that the company must appoint auditors to check the accounts of the company. The Limited Liability Act of 1855 that provided for the limited liability of shareholders also required the periodical disclosure of financial information. In the course of the debate leading up to new legislation, William Clay advanced the formula: "limited liability; paid up capital; perfect publicity".[394]

However, the year 1844 was "a highpoint in terms of disclosure".[395] The mandatory accounting and auditing requirements of the 1844 Act were removed by the Joint Stock Companies Act of 1856[396] and replaced by non-mandatory provisions in the model articles of association set out in Table B of the 1856 Act.

The annual presentation of the balance sheet and a report on the balance sheet and accounts to shareholders was included in the model articles of association set out in Table A under the Companies Act 1862.[397] It was made mandatory under the Companies Act 1900.[398]

The appointment of auditors was not mandatory under the 1856 and 1862 Acts. Table A under the Companies Act 1862 provided for an annual audit to

392 Cited from Chambers RJ, Wolnizer PW (1991) p 199.

393 Brown RG (1962) p 697: "There is little in the period of 1500 to 1850 which would distinguish audit objectives from earlier times. Auditing was expanded in scope to include the earlier manufacturing activities arising during the early days of the Industrial Revolution."

394 See Chambers RJ, Wolnizer PW (1991) p 209.

395 Harris R (2013) p 362.

396 Edwards JR (2019) pp 81 and 168.

397 Section 14 of the Companies Act, 1862: "... [The Articles of Association] may adopt all or any of the provisions contained in the table marked A in the First Schedule hereto ..." Companies Act 1862, First Schedule, Table A Regulations for management of a company limited by shares.

398 Section 23 of the Companies Act 1900: "... and in every such report shall state whether, in their opinion, the Balance Sheet referred to in the report is properly drawn up, so as to exhibit a true and correct view of the state of the company's affairs ..." See Edwards JR, Webb K (1985).

be undertaken by "one or more auditor or auditors".[399] The appointment of an auditor or auditors was made mandatory by the Companies Act 1900.[400]

Mandatory accounting and auditing requirements were thus introduced on a lasting basis in the Companies Act 1900 after a lapse of forty-four years.[401] However, the 1900 Act said nothing about the qualification of the auditor (other than that he should not be a director) or the content of the balance sheet.[402]

As was pointed out in the 1945 Cohen Report,[403] an auditor did not yet have to be professionally qualified at the turn of the twentieth century.[404] This changed when the Companies Act 1947 required the auditor to be a member of one or other of the professional bodies recognised from time to time by the Board of Trade.[405]

The Companies Act 1947[406] required even group accounts to be published[407] and the audit report to be expanded to cover the profit and loss account and group accounts.[408] Moreover, the earlier term "true and correct view" was replaced by the term "true and fair view".[409] The earlier term was thought to permit the publication of information that was technically accurate but potentially misleading following the *Royal Mail Case*.[410] The requirements were consolidated in the Companies Act 1948.[411]

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399 Companies Act 1862, First Schedule, Table A, Article 83: "Once at the least in every year the accounts of the company shall be examined, and the correctness of the balance sheet ascertained, by one or more auditor or auditors."

400 Section 21(1) of the Companies Act 1900: "Every company shall at each annual general meeting appoint an auditor or auditors to hold office until the next annual general meeting."

401 Edwards JR (2019) pp 316 and 324.

402 Edwards JR (2019) pp 131 and 153; section 21(3) of the Companies Act 1900: "A director or officer of the company shall not be capable of being appointed auditor of the company."

403 Report of the Committee on Company Law Amendment. Presented by the President of the Board of Trade to Parliament by Command of His Majesty, June 1945 (Cohen Report).

404 *Ibid.*, paragraph 110: "There are, no doubt, cases in which the appointment of an auditor without professional qualifications may be convenient, for instance, where the company is formed for convenience of administration in running a members' club, but we think it essential to adhere strictly to the principle that the audit of accounts should be conducted by fully qualified persons. It is also of first importance, in our view, to ensure the independence of the auditor."

405 Section 23 of the Companies Act 1947.

406 See Edwards JR (2019) p 78.

407 Section 14 of the Companies Act 1947.

408 Section 22(1) of the Companies Act 1947.

409 Section 3(2) of the Second Schedule to the Companies Act 1947.

410 Rex v Lord Kylsant [1932] 1 KB 442 (the Royal Mail Case); Edwards JR (2019) p 229.

411 Section 156(1) of Companies Act 1948: "The profit and loss account and, so far as not incorporated in the balance sheet or profit and loss account, any group accounts laid before

France and Germany. In France, the law of 1863[412] and the law of 1867[413] required "commissaires" or audit committees consisting of shareholders elected by shareholders.[414] Commissaires were deemed necessary as it had turned out that the general meeting in practice was unable to monitor management.[415] The efficiency of this form of control was hampered by the legal requirement that the commissaires were shareholders and "the practice in France to consider the auditor as a candidate for future election to the directorate".[416]

The company law reform of 1966[417] introduced the commissariat aux comptes. The regulation of 1969 created the commissaire aux comptes as a regulated profession.[418] These commissaires aux comptes acted as external auditors.[419] The provisions on commissaires aux comptes are included in the Code de commerce.[420]

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the company in general meeting, shall be annexed to the balance sheet, and the auditors' report shall be attached thereto." Section 162(1) of Companies Act 1948: "The auditors shall make a report to the members on the accounts examined by them, and on every balance sheet, every profit and loss account and all group accounts laid before the company in general meeting during their tenure of office, and the report shall contain statements as to the matters mentioned in the Ninth Schedule to this Act." Section 162(2) of Companies Act 1948: "The auditors' report shall be read before the company in general meeting and shall be open to inspection by any member." Section 3(2) of the Ninth Schedule to the Companies Act 1948: "Whether, in their opinion and to the best of their information and according to the explanations given them, the said accounts give the information required by this Act in the manner so required and give a true and fair view—(a) in the case of the balance sheet, of the state of the company's affairs as at the end of its financial year; and (b) in the case of the profit and loss account, of the profit or loss for its financial year; or, as the case may be, give a true and fair view thereof subject to the non-disclosure of any matters (to be indicated in the report) which by virtue of Part III of the Eighth Schedule to this Act are not required to be disclosed."

412 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée. For commissaires, see articles 15–17 of the law of 1863; Schäffle A (1865) pp 252–253.

413 Loi du 24 juillet 1867 sur les sociétés commerciales.

414 Article 32 of the law of 1867; Kuhn AK (1912) p 118.

415 Schäffle A (1865) pp 252–253: "Das Gesez geht bei dieser Schöpfung von der hundertfältigen Erfahrung aus, dass die Generalversammlungen ohne eigenes Organ eine jedes vernünftigen Willens entbehrende, bald factiöse, bald dupirte Heerde ist."

416 Kuhn AK (1912) pp 121–122.

417 Loi n°66–537 du 24 juillet 1966 sur les sociétés commerciales.

418 Décret n°69–810 du 12 août 1969 relatif à l'organisation de la profession et au statut professionnel des commissaires aux comptes.

419 See, for example, Fanto JA (1998a) pp 63–64.

420 See articles 820 and 823 of the Code de commerce.

In Germany, the reform of 1870 made the supervisory board responsible for the auditing of the balance sheet and accounts.[421] Lacking the necessary skills, supervisory boards turned to professional auditors for help.[422] Statutory audits for stock corporations were introduced in 1931 as a consequence of the economic crisis and the collapse of large corporations.[423] The company law reform of 1931 thus created the profession of statutory auditors.[424]

The US. In the US, the British auditing objectives and techniques formed the basis for the development of the auditing profession. After the turn of the twentieth century, however, the American auditing profession progressed independently of its origins.[425] The first major American work on auditing described the purposes of auditing as follows: "Present-day purposes are 1. To ascertain actual financial condition and earnings of an enterprise. 2. Detection of fraud and errors, but this is a minor objective."[426] The audit of the profit and loss account was made mandatory in the US by the enactment of the Securities and Exchange Act of 1934.[427]

The basic model of annual reporting is well established in the US: "In many ways the basic model of public company annual reporting has not changed in more than a half-century."[428] However, corporate scandals such as Enron and WorldCom have influenced the audit requirement and the work of auditors.

In late 2001, Enron filed for bankruptcy in the Southern District of New York. Enron's reported financial condition had been sustained by institutionalised and systematic accounting fraud. The Enron scandal caused the dissolution of Arthur

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421 Article 225(1) of ADHGB 1870: "Ist ein Aufsichtsrath bestellt, so überwacht derselbe die Geschäftsführung der Gesellschaft in allen Zweigen der Verwaltung; er kann sich von dem Gange der Angelegenheiten der Gesellschaft unterrichten, die Bücher und Schriften derselben jederzeit einsehen und den Bestand der Gesellschaftskasse untersuchen." Article 225(2) of ADHGB 1870: "Er hat die Jahresrechnungen, die Bilanzen und die Vorschläge zur Gewinnvertheilung zu prüfen und darüber alljährlich der Generalversammlung der Aktionaire Bericht zu erstatten."

422 Quick R (2004) p 283.

423 *Ibid*., p 281, Abstract, and p 284: "Entscheidender Anlass für die Einführung der Pflichtprüfung in Deutschland war die große Wirtschaftskrise."

424 *Ibid*., p 285.

425 Brown RG (1962) p 699.

426 Montgomery RH (1912) p 13; Brown RG (1962) p 699.

427 Section 12(b)(I) and (J) of Securities and Exchange Act 1934: "balance sheets for not more than the three preceding fiscal years, certified if required by the rules and regulations ox the Commission by independent public accountants; profit and loss statements for not more than the three preceding fiscal years, certified if required by the rules and regulations of the Commission by independent public accountants …"

428 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Deloitte & Touche LLP dated 15 July 2016.

Andersen, one of the big accounting firms. The Enron scandal and similar scandals led to the Sarbanes-Oxley Act of 2002.

The Sarbanes-Oxley Act mandated numerous changes to strengthen the accountability of public companies. For companies, the most expensive provision to comply with is Section 404. Section 404 requires management and the external auditor to report on the adequacy of the company's internal control on financial reporting (ICFR).

Statutory audits and statutory auditors in the EU. The Member States of the EU have adopted common rules on statutory audits and statutory auditors. The annual accounts of limited-liability companies are required to be audited under provisions implementing EU directives[429] unless the company is small.[430]

The Statutory Audit Directive[431] was adopted in 2006, that is, just before companies were struck by the financial crisis of 2007–2009. The Statutory Audit Directive represented "a big step towards harmonizing the statutory audit function throughout the EU, thus aiming to increase audit quality and to gradually converge upon a common European audit market".[432]

Together with the Company Reporting Directive,[433] the Statutory Audit Directive is seen as the European equivalent to the Sarbanes-Oxley Act. It was necessary for the EU to align the European regulatory framework with that applicable to public companies in the US, because many European companies fell within the scope of the Sarbanes-Oxley Act and would not have been able to comply with two conflicting sets of requirements.

429 Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC. Before the adoption of Directive 2013/34/EU, the regulatory framework was summed up in recital 1 of Directive 2006/43/EC (Directive on statutory audits). See also Audit Policy: Lessons from the Crisis. European Commission, Green Paper, COM(2010) 561 final, footnote 8.

430 See recital 43 of Directive 2013/34/EU (Directive on annual financial statements, consolidated financial statements and related reports).

431 Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC.

432 Willekens M, Dekeyser S, Simac S (2019) p 15.

433 Directive 2006/46/EC of the European Parliament and of the Council of 14 June 2006 amending Council Directives 78/660/EEC on the annual accounts of certain types of companies, 83/349/EEC on consolidated accounts, 86/635/EEC on the annual accounts and consolidated accounts of banks and other financial institutions and 91/674/EEC on the annual accounts and consolidated accounts of insurance undertakings.

For example, the Statutory Audit Directive included a comprehensive set of rules related to the duties of a statutory auditor, introduced a requirement for both public oversight for the audit profession, improved cooperation between regulatory authorities in the EU, introduced International Standards on Auditing (ISAs), and regulated auditor liability, continuing professional education, and audit partner rotation.

Some aspects of the regulatory framework were perceived as weaknesses in the aftermath of the global financial crisis of 2007–2009.[434] The European Commission started a process leading to a regulatory reform by publishing a Green Paper in 2010.[435]

The Statutory Audit Directive consequently was amended by the Directive on annual financial statements[436] and complemented by the Regulation on specific requirements regarding statutory audit of public-interest entities.[437] Both of them came into effect in June 2016. The purpose of the Regulation was to improve the quality of the audits of public-interest entities.[438]

Conclusion. Auditing was first developed as a way to detect fraud. The detection of fraud became less important in the twentieth century. There is nowadays legislation focusing on audit quality. Generally, the audit requirement is used as a way to facilitate the monitoring of management through publicity.

2.4.7 Disclosures to the Public

The audit requirement was complemented by broader disclosure obligations. It is assumed that disclosure obligations and increased transparency are ways to change behaviour for the better: “Sunlight is said to be the best of disinfectants; electric light the most efficient policeman.”[439]

434 Willekens M, Dekeyser S, Simac S (2019) p 15.

435 Audit Policy: Lessons from the Crisis. European Commission, Green Paper, COM(2010) 561 final.

436 Directive 2013/34/EU.

437 Regulation (EU) No 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC.

438 Article 34(1) of Directive 2013/34/EU (Directive on annual financial statements) and recital 5 of Regulation 537/2014.

439 Brandeis LD (1914).

Disclosure obligations belong to the cornerstones of corporate governance. The role of disclosures depends on the corporate governance model.[440] Public disclosure obligations were developed side by side with the corporate governance model. While continental European company law relied on the separation of powers and the supervisory board as the monitoring mechanism, English company law relied on public disclosures and shareholders as a monitors.[441] The emergence of public disclosures in the late nineteenth century had a connection to a new trend in public share ownership. From the 1880s, shareholders began to passively hold diversified portfolios.[442]

Continental European company law with separation of powers. Corporate bodies should be able to take decisions on the basis of relevant information. The duty to disclose information and the allocation of information are connected to the allocation of power and duties in the company. For example, where corporate powers are vested in shareholders in general meeting, rational corporate decision-making requires the prior disclosure of information to shareholders,[443] and a company with a two-tier board needs disclosures to the management board and the supervisory board (section 2.4.10).[444] Moreover, information management is required by the business judgment rule (section 2.4.11).[445]

It is characteristic of continental European company law that power is allocated between different corporate bodies that participate in corporate decision-making. This has influenced the regulation of disclosures and the allocation of information in continental European company law. Continental European com-

440 See, for example, Hopt KJ (2019a) III.1(b): "Disclosure and auditing are considered by academics as well as legislators to be the cornerstones of corporate governance. Surprisingly enough, the American corporate governance discussion in academia (not in practice) tends to neglect disclosure and auditing as major means of corporate governance."

441 Hopt KJ (2019b) pp 510 – 511.

442 Bryer RA (1993).

443 See, for example, Fanto JA (1998a) p 47: "Under the basic French corporate law governing public companies, the société anonyme, the shareholder has the right to see a significant amount of information."

444 See, for example, Schäffle A (1865) pp 252 – 253 on the French law of 1863: "Art. 15 – 17 schaffen der Generalversammlung ein besonderes Organ der Controle gegenüber der Administration in den Commissären … Das Gesez geht bei dieser Schöpfung von der hundertfältigen Erfahrung aus, dass die Generalversammlungen ohne eigenes Organ eine jedes vernünftigen Willens entbehrende, bald factiöse, bald dupirte Heerde ist." Hopt KJ (2019b) p 527: "Allgemein anerkannt ist heute, dass die Information für den Aufsichtsrat zentral ist. Ohne zuverlässige Information über das Geschehen in der Aktiengesellschaft kann er weder effektiv überwachen noch sinnvoll beraten. Wichtigste Informationsquelle ist herrkömmlich der Vorstand …"

445 Hopt KJ (2019b) p 528.

pany law has focused on such traditional questions of corporate governance since the nineteenth century.

This said, the growth of public markets was complemented by the adoption of public disclosure duties.[446] For example, the German Exchange Act of 1896 (Börsengesetz)[447] addressed the admission of securities to trading,[448] the duty to publish a prospectus, and prospectus liability.[449] Before that, the duty to publish a prospectus was required in Berlin under the Börsenordnung of 1884.[450]

English company law with an unclear separation of powers. A different path was chosen in English company law.

In the second half of the nineteenth century, the general approach was to regard a company's financial affairs as a matter of concern only to directors, managers, and shareholders.[451] At the turn of the century, contemporary opinion attached high priority to confidentiality if not secrecy in financial matters (*Newton v Birmingham Small Arms Co. Ltd*).[452] Convention held that it was generally in the shareholders' best interests to place their faith in management, rely on external audit for protection, and attend the annual general meeting to ask the questions they wanted to ask. Public disclosures were not in their interests.[453] While the Companies Act 1900 required auditors to report on whether the balance sheet laid before the annual general meeting showed "a true and correct view of the

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446 Fanto JA (1998a) p 48: "The most important legal means whereby capital market investors acquire information about publicly-traded firms is through mandatory disclosure. While only recently developed and not as extensive as that required of companies under U.S. law and regulation, such disclosure has gradually developed in France."

447 Fleckner AM, Hopt KJ (2013) p 542: "With the foundation of the German Empire (Deutsches Reich) came the fulfillment of the constitutional requirements, with the abandonment of liberal views the political requirements, and with the bad outcomes of the former regulatory approaches the legislative requirements to create an Exchange Act: the Börsengesetz (1896)."

448 §§ 36 – 42 of the Börsengesetz of 1896.

449 §§ 43 – 47 of the Börsengesetz of 1896.

450 Wiener FA (1905) § 4 pp 15 – 16.

451 Edwards JR (2019) p 78.

452 See *ibid.*, pp 132 and 154; Newton v Birmingham Small Arms Co. Ltd [1906] 2 Ch. 378 at 389 per Buckley J: "Those who are engaged in commerce are familiar with the fact that undue publicity as regards the details of their trade, or as to their financial arrangements, may often be injurious to traders, having regard to the rivalry of competitors in trade, to complications sometimes arising from strained relations between capital and labour, and the like. There are legitimate reasons for ensuring secrecy to a proper extent. It is not, I think, necessary, nor, having regard to the great utility of these Acts, is it desirable, to expose persons who trade under these Acts to the necessity of publicity from which their competitors are free, unless such publicity is required to ensure commercial integrity."

453 Edwards JR (2019) p 78.

state of the company's affairs as shown by the books of the company",[454] public disclosure was regarded as a threat to the popularity of the limited-liability company form at the turn of the century.[455] The maintenance of secret reserves was regarded as a good thing that made the company stronger (*Newton v Birmingham Small Arms Co. Ltd*).[456]

Without clear separation of powers in the company, English company law nevertheless started to focus on disclosures to the public.

First, a "rigorous regulation of the company prospectus was made one of the principal features" of company law.[457] The Companies (Consolidation) Act 1908, an Act to consolidate the Companies Act 1862 and the Acts amending it, required the issuing and filing of a prospectus or the filing of similar information before the offering of any share capital or debentures to the public for subscription.[458] The 1908 Act laid down detailed requirements as to the particulars of the prospectus.[459] Moreover, the Act provided for liability for statements in the prospectus.[460] The new rules were "made necessary by the abuses which had arisen in connection with the large number of companies launched for exploitation in the colonies".[461] The prospectus requirement did not apply to private companies.[462]

Second, a series of events following the 1931 *Royal Mail Case*[463] led to the outlawing of secret reserves in the Companies Act 1947 that required transfers to and from reserves to be fully disclosed.[464]

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454 Section 23 of the Companies Act 1900.

455 Edwards JR (2019) pp 130 – 131.

456 *Ibid.*, pp 224 – 227 and 333. See also paragraph 101 of the Cohen Report (Report of the Committee on Company Law Amendment. Presented by the President of the Board of Trade to Parliament by Command of His Majesty, June 1945): "An undisclosed reserve is commonly created by using profits to write down more than is necessary such assets as investments, freehold and leasehold property or plant and machinery; by creating excessive provisions for bad debts or other contingencies; by charging capital expenditure to revenue; or by undervaluing stock in trade. Normally the object of creating an undisclosed reserve is to enable a company to avoid violent fluctuations in its published profits or its dividends."

457 Kuhn AK (1912) pp 98 – 99.

458 Sections 80, 82 and 85 of the Companies (Consolidation) Act 1908.

459 Section 81 of the Companies (Consolidation) Act 1908. See Kuhn AK (1912) pp 110 – 111.

460 Section 84 of the Companies (Consolidation) Act 1908. For limitations, see also section 81(6) and section 81(9) of the Act.

461 Kuhn AK (1912) pp 98 – 99.

462 Section 85(2) of the Companies (Consolidation) Act 1908.

463 Rex v Lord Kylsant [1932] 1 KB 442 (the Royal Mail Case); Edwards JR (2019) pp 229, 329 and 333.

464 Section 13(7) of and the First Schedule to the Companies Act 1947; paragraph 101 of the Cohen Report.

Third, in the 1945 report of the Cohen Committee that preceded the Companies Act 1947,[465] "fullest practicable disclosure" became the identified priority.[466] According to the Cohen Report, "the position of auditors would be strengthened if the law were to prescribe a minimum amount of information to be disclosed in all balance sheets and profit and loss accounts".[467] The Cohen Report "marked a sharp contrast with the emphasis previously placed on financial confidentiality".[468]

US securities laws. In the early twentieth century, the regulation of public disclosures in English law was said to be "much in advance of prevailing legislation in most of the American states".[469] Only regulated businesses in the US were required to file financial statements regularly with the government before the 1930s.[470] Mandatory public disclosures nevertheless emerged as an important design principle in the US as well.

The drivers of the regulation of mandatory disclosures included technological advancement, the reception of British practices, and financial market integration. Many US firms that sought to raise capital in London began to follow British practices, and advances in communications technology made possible a rapid transmission of information about corporate financial affairs.[471]

Moreover, the regulation of mandatory disclosures in the US had its roots in a new regulatory culture. In the late nineteenth and early twentieth centuries, the US faced many societal problems. To address some of the problems, legislators chose to regulate business. For example, the Sherman Antitrust Act (1890) and the Clayton Antitrust Act (1914) were enacted to fight monopolies and restrictive business practices.

Public disclosures became mandatory under the Securities Act of 1933 and the Securities Exchange Act of 1934. Public disclosures in the US are thus based on securities law rather than company law (section 4.2.3).

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465 Report of the Committee on Company Law Amendment. Presented by the President of the Board of Trade to Parliament by Command of His Majesty, June 1945 (Cohen Report).

466 *Ibid*., paragraph 5: "The Companies Acts have been amended from time to time to bring them into accord with changing conditions, but if there is to be any flexibility opportunities for abuse will inevitably exist. We consider that the fullest practicable disclosure of information concerning the activities of companies will lessen such opportunities and accord with a wakening social consciousness."

467 *Ibid*., paragraph 97. See also Edwards JR (2019) p 140.

468 Edwards JR (2019) p 324.

469 Kuhn AK (1912) p 111.

470 Baskin JB, Miranti PJ Jr (1997) p 142.

471 *Ibid*.

A central goal of the federal securities laws is full and fair disclosure.[472] In 1936, the Securities and Exchange Commission (SEC) described the purposes of the disclosure rules in the Securities Exchange Act as follows: "to make available to the average investor honest and reliable information sufficiently complete to acquaint him with the current business conditions of the company, the securities of which he may desire to buy or sell".[473] The publicity features of the Securities Acts were made clear in the House Report on the Exchange Act.[474] In 1963, disclosure was described as "[t]he keystone of the entire structure of Federal securities legislation".[475]

The SEC has recently summed up the purpose of these disclosure rules as follows: "In enacting these laws, Congress recognized that investors must have access to accurate information important to making investment and voting decisions in order for the financial markets to function effectively. Thus, our disclosure rules are intended not only to protect investors but also to facilitate capital formation and maintain fair, orderly and efficient capital markets."[476]

From early on, however, it was understood that no disclosures would protect investors against business failures. Business failures were seen as part of life.[477] There was a trade-off between sanctions for non-disclosure and management discretion: "Like most questions of law the problem reduces itself to one of degree. It is … [a] matter of giving maximum protection to investors with minimum interference to business …"[478] Moreover, it was accepted that disclosures can

472 See Preamble of the Securities Act (stating it is an Act to provide full and fair disclosure of the character of securities sold in interstate and foreign commerce and through the mails, and to prevent frauds in the sale thereof, and for other purposes.). In enacting the mandatory disclosure system under the Exchange Act, Congress sought to promote complete and accurate information in the secondary trading markets. See S. Rep. No. 73 – 1455, 73rd Cong., 2nd Sess., 1934 at 68 (stating "[o]ne of the prime concerns of the exchanges should be to make available to the public, honest, complete, and correct information regarding the securities listed") and H.R. Rep. No. 73 – 1383, 73rd Cong., 2nd Sess., 1934 at 11 (stating "[t]here cannot be honest markets without honest publicity. Manipulation and dishonest practices of the market place thrive upon mystery and secrecy."). Cited from SEC Release No. 33 – 10064, 34 – 77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), III.A.1, p 23, footnote 51.

473 SEC (1936) pp 1 – 2.

474 See Hanna J (1937) pp 257 – 258, footnote 5.

475 Special Study of Securities Markets (1963b) p 1.

476 SEC Release No. 33 – 10064, 34 – 77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), III.A.1, p 23.

477 Douglas WO, Bates GE (1933) p 172: "[A] substantial percentage of industrial investment will in any event be lost."

478 *Ibid.*, pp 172 – 173.

protect retail investors only indirectly. While "helpless investors will not be helped by the disclosure documents" as such, they can be "protected by simply relying on the market price".[479]

Hopt has recently pointed out that, "[s]urprisingly enough, the American corporate governance discussion in academia (not in practice) tends to neglect disclosure and auditing as major means of corporate governance."[480] If this is true, it could be for several reasons. First, investors may benefit less than expected from disclosures. Second, few investors have resources to track and analyse disclosures.[481] Third, extensive disclosure obligations have created noise and made individual disclosures less useful for investors (section 6.3.7). Fourth, companies that disclose information to the public must focus on regulatory compliance and the management of legal risk rather than the usefulness of disclosures to investors. Fifth, focusing on financial incentives and their alignment with the interests of current institutional shareholders is more likely to increase CEO pay and distributions to shareholders whereas mere disclosures and auditing are less likely to do so. Sixth, disclosures and auditing can be less important for board members under the unitary board model (without clear separation of monitoring and management) whereas they can be more important for supervisory board members under the two-tier board model (with clear separation of monitoring and management).

The enactment of the Securities Act and the Securities Exchange Act resulted in the creation of two separate disclosure regimes. These disclosure regimes remained distinct for approximately thirty years.[482]

There is now an integrated disclosure system in the US. The current integrated disclosure system resulted from a series of efforts triggered by a 1964 amendment to the Exchange Act, which added Section 12(g) and extended the Exchange Act's reporting requirements to companies meeting specified thresholds.[483] In 1966, professor Milton Cohen suggested in a seminal article greater coordination between the Securities Act and Exchange Act.[484] He recommended that the con-

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479 Kitch EW (2001) p 649.

480 Hopt KJ (2019a) III.1(b).

481 Kitch EW (2001) p 649.

482 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.A.

483 *Ibid.*, II.A, p 11: "The current integrated disclosure system resulted from a series of efforts triggered by a 1964 amendment to the Exchange Act, which added Section 12(g) to the Exchange Act and extended the Exchange Act's reporting requirements to companies meeting specified thresholds, including those that were not exchange listed."

484 Cohen MH (1966).

tinuous reporting obligations under the Exchange Act serve as the foundation for corporate disclosure while relaxing or eliminating overlapping Securities Act disclosure requirements.[485] According to the SEC, Cohen's article "became the intellectual touchstone for the Commission's efforts to build and implement a truly integrated corporate disclosure system".[486]

The existence of two separate disclosure regimes was addressed by Regulation S-K. Regulation S-K was adopted to foster uniform and integrated disclosure for registration statements under the Securities Act and the Securities Exchange Act. Regulation S-K created a single repository for disclosure regulation that applies to filings by registrants under both statutes.[487] The evolution of disclosure requirements has been described by the SEC in a 2016 Concept Release.[488]

The EU. The EU has put in place a large financial disclosure regime. The common disclosure regime is designed for the purposes of the internal market. Because of the integration of international capital markets, it has been deemed necessary to align the European regime with the US disclosure regime.[489] Conflicts between the two regimes could harm firms that need to comply with both regimes. In practice, firms always need to comply with the strictest disclosure rules of the applicable disclosure regimes. This is a further driver of convergence.

There is a common accounting disclosure regime for issuers (section 2.4.8).[490] There are hardly any national securities laws not influenced by European law.[491] For example, there are common rules on prospectuses. The first Prospectus Directive of 1980[492] was replaced by the Prospectus Directive of 2003 and ultimately by the Prospectus Regulation of 2017.[493] Ad-hoc disclosure obligations were

485 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.A, p 11.

486 U.S. Securities and Exchange Commission, Statement Regarding Milton Cohen. Washington, D.C., Tuesday, November 2, 2004.

487 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), I.

488 *Ibid.*

489 Merkt H (2001) pp 122–124.

490 For a summary, see Strampelli G (2018).

491 See, for example, Fleckner AM, Hopt KJ (2013) p 545.

492 Council Directive 80/390/EEC of 17 March 1980 coordinating the requirements for the drawing up, scrutiny and distribution of the listing particulars to be published for the admission of securities to official stock exchange listing.

493 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

based on the Insider Trading Directive of 1989[494] and after that the Market Abuse Directive of 2003,[495] and are now based on the Market Abuse Regulation of 2014.[496] The Shareholder Rights Directive[497] of 2017 (SRD II) is designed to increase the transparency of remuneration. SRD II addresses questions of remuneration policy, remuneration reports, and shareholder say on pay (section 2.4.11).

Conclusions. Public disclosure duties emerged as important corporate governance tools, but they emerged in different ways in continental Europe, the UK, and the US. In continental European company laws, disclosure rules were necessary to facilitate the internal decision-making of the company. In UK company law, however, the internal decision-making of the company was not based on a strict separation of powers. New investors were protected against abuses with prospectus rules. In the US, full and fair disclosure was chosen as one of the central goals of the Securities Acts. In the EU, market integration required common prospectus and disclosure rules. The integration of large markets made it necessary to align European disclosure rules with the US regulatory regime. This led to the convergence of disclosure rules.

The German separation of monitoring and management and the US public disclosure regime could to some extent be regarded as functional equivalents. In Germany, abuse was partly addressed by the ADHGB 1870 and the ADHGB 1884 that separated monitoring and management and by doing so made the governance model more self-enforcing. In the US, abuse was partly addressed by mandatory public disclosures under the Securities Act of 1933 and the Securities Exchange Act of 1934. While the Securities Acts influenced monitoring by improving transparency, they did not create the same level of control.[498] The German separation of monitoring and management protected management and made it easier for management to stick to the managerial business model. The US focus on public disclosures left boards more vulnerable and made it more difficult for them to resist the financial business model in the 1970s.

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494 Council Directive 89/592/EEC of 13 November 1989 coordinating regulations on insider dealing.

495 Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse).

496 Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (Market Abuse Regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC.

497 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.

498 See also Bratton WW, Wachter ML (2008) p 133 on the views of Dodd.

2.4.8 Accounting Standards

The development of auditing was obviously preceded by the development of accounting practices. However, accounting standards largely emerged as late as in the twentieth century. The convergence of accounting standards has been slower than the convergence of auditing requirements (section 2.4.6) and financial disclosure requirements (section 2.4.7).

The history of accounting is as long as the history of writing. In Europe, the person regarded as the "father of accounting and bookkeeping" was a Franciscan friar and mathematician called Luca Pacioli. His book Summa de arithmetica, geometria, proportioni et proportionalita (1494) contained a section on accounting and the first published description of the double-entry bookkeeping system.

For a long time, accounting was developed as a technology and practice. Accounting standards were not relevant in an agrarian society.[499]

The development of accounting led to the emergence of two basic accounting models in the Western world according to Nobes.[500] The French-German model (the macro-uniform model) has its roots in the seventeenth century, contributes to the determination of the taxable amount, and applies the principle of conservatism for business viability based on historical cost and the use of depreciation. The Anglo-Saxon model (the micro-based model) has its roots in the nineteenth century, is based on the generally more laissez-faire approach to regulation in common law countries,[501] and focuses on the interests of equity investors. Nobes sums up the two main models with "loose labels": the first macro-uniform, government-driven, and tax-dominated; and the second micro-fair-judgmental and commercially-driven.[502] All accounting systems mix rules and principles but may do it in different ways.[503]

We can have a brief look at the development of these two models.

French and German law. French law entered an interventionist path of development in the seventeenth century. The Ordonnance de commerce of 1673 (also known as "le code Savary") on non-maritime commerce laid down the first ac-

499 See von Puteani J (1818) §§ 394–396 on the status of accounting in early nineteenth-century.

500 Nobes C (2011); Tasos S (2018); Lemarchand Y, Parker RH (eds) (1996) p xxiii.

501 Generally, see Goode RM (1998) on commercial law in common law countries.

502 Nobes C (2011) Figure 1.

503 Bratton WW (2004) p 16.

counting rules to be applied in the whole country.[504] As a codification of medieval usages, the rules were not really new.[505] According to the Ordonnance, all merchants were required to keep accounts. The provisions of Napoleon's Code de commerce of 1807 were closely based on those of the Ordonnance.[506]

The development of accounting practices was driven by industrialisation and the expansion of manufacturing from 1820 to 1880.[507] From the 1820s to the First World War, most French industrial companies funded their growth internally and used accounting to hide profits and retain funds. The underlying accounting paradigm was to focus on cash flow. Most investment expenses were immediately written off.[508] Regardless of the "interventionist" path, nineteenth-century France was a liberal country in accounting matters. The 1807 Code de commerce did not require any particular techniques for the keeping of accounts. The accounting provisions of the law of 1867 required only the communication of a balance sheet and a profit and a loss account to shareholders.[509] There was plenty of cost accounting research in France in the nineteenth century.[510] While tax considerations started to prevail in accounting, the fundamental nature of French accounting did not change until the 1940s. The change was triggered by German law.

In Germany, the commercial code (HGB) of 1897 contained accounting rules for all traders (Kaufleute). In 1937, the new Aktiengesetz of 1937 laid down stricter rules for public limited-liability companies (AG) in particular. The rules were influenced by the popular ideas of the German accounting theorist Eugen Schmalenbach. For example, Schmalenbach argued that "the value of anything is determined only by the utility that it can bring; anything which is not in some way useful has no value".[511] The Aktiengesetz of 1937 therefore limited the maximum valuation of assets. Schmalenbach was also the father of the so-called accounting plan. Schmalenbach's model placed cost accounting at the centre of a coding system that attempted to mirror the flow of resources to, from and within the firm. The model was accepted by the German government in 1937 in the form

504 Ordonnance de 1673, Titre III. Des Livres & Registres des Négocians, Marchands & Banquiers.

505 Lemarchand Y, Parker RH (eds) (1996) pp xv and xxvi; Monéger J (2004) p 178.

506 Lemarchand Y, Parker RH (eds) (1996) p xxvi; Monéger J (2004) p 179.

507 Lemarchand Y, Parker RH (eds) (1996) p xvii on Manufacture Royale des Glaces, also known as Compagnie de Saint-Gobain.

508 *Ibid.*, pp xvi and xxvii.

509 *Ibid.*, pp xxvii-xxviii.

510 Edwards RS (1937); Holzer HP, Rogers W (1990); Lemarchand Y (2016).

511 Cited from Potthoff E, Sieben G (1994) p 90, citing Schmalenbach E (1937) p 29.

known as the Göring Plan, and offered a means of control over the production and supplies for organising the economy.[512]

German law influenced the French Accounting Plan of 1942 (Plan comptable général) that was prepared under the German occupation. Arranged in accordance with the pattern of circulation of goods within an enterprise, it integrated financial accounting and management accounting into one whole.[513]

After the Second World War, work on the French Accounting Plan continued. Unlike the 1942 Plan, the Accounting Plan of 1947 (Plan comptable général) was based on the separation of financial accounting (comptabilité générale) and cost accounting (comptabilité analytique). Cost accounting was left optional.[514] Interestingly, the accounting plan imposed by the German occupiers on small and medium enterprises in 1940 was also dualist.[515] The 1947 Plan comptable général is regarded as the first accounting plan in the world, as a success, and as a model for many countries,[516] but it led to the stagnation of French accounting theory.[517] Today, the Commercial Code of 1966 requires companies to maintain accounting books and prepare annual financial statements. Autorité des Normes Comptables (ANC, the Accounting Standards Authority) is the legal body responsible for accounting standard setting.[518]

A similar dual system emerged in Germany. In both countries, a dual system was tax motivated. Financial accounting was necessary for tax and legal purposes.[519] Moreover, it helped management to keep the firm's financial situation se-

512 Bánociová A, Pavliková L (2014) p 313.
513 Lemarchand Y, Parker RH (eds) (1996) pp xviii-ix.
514 *Ibid.*, pp xxvii-xxviii.
515 *Ibid.*, pp xviii-ix.
516 *Ibid.*, pp xvii-xviii; Fortin A (1991); Bánociová A, Pavliková L (2014).
517 Lemarchand Y, Parker RH (eds) (1996) p xx: "During the 1940s, standardization of enterprise accounting practices to conform to the newly issued accounting code (Plan comptable general) disturbed the natural evolution of French accounting theory. Although the beginning of the century had been a period of theoretical effervescence ... the 1950s and 1960s were years of stagnation, during which all but a few specialists devoted themselves to work on standardizing and popularizing the accounting code."
518 Created under Ordinance No. 2009–79 of 22 January 2009 and application Decree No. 2010–56 of 15 January 2010.
519 Standish P (1996) p 426: "The clearest initial expression of benefits sought from the code is found in the report of the 1946 commission, summarised as follows: Transparency in accounting would provide users with information for proper evaluation that is denied when accounting operates inconsistently, and for more effective control by public authorities. Better financial performance information from enterprises would provide the basis for a more equitable tax system by contributing to an understanding of the sources and distribution of national income. Standar-

cret.[520] The aim of cost accounting was to present the earned profits and financial situation of the enterprise without reflecting the tax implications.

In France and Germany, the tendency to let tax considerations override reporting considerations made consolidated accounts (that are drawn up independently of any tax considerations) grow in importance.[521]

UK law. No similar chain of events took place in Britain.[522] With industrialisation and the emergence of limited-liability companies, bookkeeping became a legal requirement. The Joint Stock Companies Act of 1844 required directors to "cause the Books of the Company to be balanced, and a full and fair Balance Sheet to be made up". However, accounting practices belonged, with little state interference, to the sphere of chartered accountants. Accounting rules did not act as a significant constraint on managerial freedom.[523] The form and contents of annual reports and accounts were left to the market for much of the second half of the nineteenth century.[524] For example, the use of secret reserves was regarded as necessary (*Newton v Birmingham Small Arms Co. Ltd*).[525] In line with the earlier laissez-faire and minimum disclosure approach,[526] the Cohen Committee that preceded the Companies Act 1947 did not recommend the standardisation of accounts.[527] Standardised balance sheet formats and profit and loss account formats were introduced in the Companies Act 1981, that is, much later than in Germany and France.[528] The Companies Act 1947 nevertheless required a true and fair view.[529]

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dised enterprise financial accounting would contribute to the construction of national income statistics."

520 Lemarchand Y, Parker RH (eds) (1996) pp xviii-ix.

521 *Ibid.*, p xxvii.

522 *Ibid.*, p xxvi.

523 Edwards JR, Webb KM (1982); Edwards JR (2019); Lemarchand Y, Parker RH (eds) (1996) p xxv.

524 Edwards JR (2019) p 191.

525 Newton v Birmingham Small Arms Co. Ltd [1906] 2 Ch. 378; Edwards JR (2019) pp 132 and 154 – 155.

526 Edwards JR (2019) pp 176, 194 and 199.

527 Paragraph 97 of the Cohen Report: "In our view the diversity of companies is such that it is doubtful whether standard forms of accounts would be practicable and in any event we fear that standard forms might restrict further progress in the technique of conveying information through the published accounts."

528 Edwards JR (2019) pp 200 – 201.

529 *Ibid.*, p 229; section 13(1) of the Companies Act 1947: "Every balance sheet of a company shall give a true and fair view of the state of affairs of the company as at the end of its financial year, and every profit and loss account of a company shall give a true and fair view of the profit or loss of the company for the financial year."

The EU. In the EEC, the Fourth Company Law Directive increased the harmonisation of accounting standards in 1978.[530] The Fourth Directive was focused on creating uniformity in financial reporting. The Directive was regarded as necessary, because "the coordination of national provisions concerning the presentation and content of annual accounts and annual reports, the valuation methods used therein and their publication in respect of certain companies with limited liability is of special importance for the protection of members and third parties".[531] The Seventh Company Law Directive addressed consolidated accounts.[532] The Fourth Directive was influenced by the French-German model but incorporated even some elements of Anglo-Saxon accounting theory such as the idea of a "true and fair view".[533] Issuers must comply with an extensive accounting regime under EU law.[534]

The US. In the US, the need to develop accounting standards was triggered by the stock market crash of 1929 that was followed by the Great Depression. Pressures on the accounting profession to establish accounting standards prompted the American Institute of Accountants (now known as the AICPA) and the NYSE to start an effort to review and revise financial reporting requirements. The purpose of Securities Act of 1933 and the Securities Exchange Act of 1934 was to restore investor confidence.

The 1934 Act also created the SEC that was made responsible for setting financial accounting and reporting standards for publicly-traded companies. The SEC chose to delegate its rule-making responsibilities to the private sector but may still change private-sector standards. The private-sector standard-setting bodies have included the Committee on Accounting Procedure (CAP, a committee of the American Institute of Accountants, from 1938 to 1959), the Accounting Principles Board (APB, from 1959 to 1973), the Financial Accounting Standards Board (FASB, since 1973), and the Government Accounting Standards Board (GASB, since 1984).

This model raised two fundamental concerns. First, according to Johnson and Kaplan, the dominance of financial reporting may have reduced the quality of management accounting in the twentieth century.[535] Second, the US business

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530 Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 54(3)(g) of the Treaty on the annual accounts of certain types of companies.
531 *Ibid.*, recital 1.
532 Seventh Council Directive 83/349/EEC of 13 June 1983 based on the Article 54(3)(g) of the Treaty on consolidated accounts.
533 Article 2 of Directive 78/660/EEC (Fourth Company Law Directive); Edwards JR (2019) p 325.
534 See, for example, Strampelli G (2018).
535 Johnson HT, Kaplan RS (1987).

community came to rely on the "mastery and manipulation" of FASB's rule-based system. After the collapse of Enron and Arthur Andersen in 2002, many demanded a principles-based reform.[536] Enron's problems may nevertheless have had more to do with bad corporate governance than with the style of accounting regulation.[537]

International convergence. Accounting standards varied from country to country in the late twentieth century. It is customary to refer to the classification suggested by Nobes.

In 1986, Pierre Bérégovoy, a French politician, summed up three basic approaches as follows: "Sometimes specific standards applying to each of the main problems taken in isolation are worked out by the accounting profession, which may consult other interested parties but remains solely responsible for the decisions taken. On the contrary, accounting may be purely and simply government-regulated. Lastly, an intermediate method is adopted in some countries, including France, with systematic consultations among all parties concerned. In many cases a consensus can be reached. Where this is not possible, government intervention preserves the public interest. It seems to us to be perfectly reasonable that the government should have the last work in deciding on the main points of standardization and make sure that no one interest group can 'lay down the law' to others."[538]

There were efforts to create an international body to establish international accounting standards. In 1973, nine countries founded the International Accounting Standards Committee (IASC).[539] In 2001, the IASC reorganised itself to act as an umbrella organisation to the International Accounting Standards Board (IASB), a new standard-setting body. The accounting standards issued by the IASB are designated as International Financial Reporting Standards (IFRS).

Since October 2002, the IASB and FASB have been working to remove differences between international standards and US GAAP towards a common set of

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536 Bratton WW (2004) p 19.

537 *Ibid.*, p 22: "Contrary to the conventional wisdom, then, the central problem at Enron lay not with the rules themselves but with the company's failure to follow them. The Enron disaster stemmed not from the rules' structural shortcomings but from the corruption of Enron' s managers and perverse financial incentives that inclined its auditor towards cooperation." Bratton compares the principles-based system and the rule-based system.

538 OECD (1986) pp 9–10; Lemarchand Y, Parker RH (eds) (1996) p xxiii.

539 The nine countries were France, Germany, the Netherlands, Japan, the UK, Australia, Canada, Mexico, and the US. Lemarchand Y, Parker RH (eds) (1996) p xxiii.

high quality global accounting standards. Their commitment to the convergence effort was embodied in a memorandum known as the Norwalk Agreement.

The convergence of accounting standards is slow. In a 2011 study, Nobes could still find the same groupings as in 1980.[540] At the time of Brexit, however, one could already identify a European system based on the continental European model with the UK and Canada as new members of the European system.[541] The change was mainly achieved by Regulation 1606/2002.[542]

Under Regulation 1606/2002,[543] listed companies in the EU were required to use IAS/IFRS when preparing their consolidated financial statements for the financial year 2005 and onwards. In the UK, Companies Act 2006 permitted all companies to publish their individual accounts in accordance with UK generally accepted accounting principles and non-listed parent companies to also publish their consolidated accounts complying with that regime. This changed in 2013 when the Financial Reporting Council (FRC) issued FRS 102 (The Financial Reporting Standard applicable in the UK and Republic of Ireland). FRS 102 was intended as a move towards an international-based framework for financial reporting. FRC preferred financial reporting standards that "have consistency with international accounting standards through the application of an IFRS-based solution unless an alternative clearly better meets the overriding objective".[544] According to Edwards, "[t]hese episodes might be interpreted as signalling the effective end of British regulation of company financial reporting practices".[545]

Conclusion. The development of accounting standards is a relatively recent phenomenon. The development of accounting standards was preceded by the audit requirement and public disclosure obligations. There is a high level of international convergence of accounting standards for public companies.

540 Nobes C (2011): "[A]fter 30 years of harmonization led by the IASC/B and by the EU, international differences are clearly visible and countries form the same groupings as they did decades ago, including an Anglo group that contains Australia (not in the EU) and the U.K. (in the EU)."

541 Tasos S (2018).

542 Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards.

543 Article 4 of Regulation (EC) No 1606/2002.

544 FRS 102 (2013), Summary.

545 Edwards JR (2019) pp 3–4.

2.4.9 Different Limited-Liability Company Forms

As corporate organisations grew bigger and more complex, company law had to adapt. Several mechanisms were developed to: improve the quality of decision-making; address conflicts of interest and dead-lock situations; and deal with the existence of different kinds of firms. The quality of decision-making was improved by the use of boards (section 2.4.10). Situations of self-interested decision-making and dead-lock situations were addressed by several alternative or complementary mechanisms (section 2.4.11). Generally, dealing with the increasing complexity of regulation and the large variety of firms required the use of different kinds of limited-liability company forms. This design principle can be found in both continental Europe and the US.

Different company forms in national law. It is characteristic of the development of company law that merchants have been able to choose from a pool of alternative company forms. Some company forms emerged from contract practices. The roots of limited-liability companies can be traced to the Italian commenda.[546] In England, restrictions imposed by the Bubble Act did not prevent the industrial revolution between 1760 and 1850 as most merchants and entrepreneurs did not need to mobilise shareholder capital on a large scale and could use functional equivalents to limited-liability companies.[547] Early limited-liability companies such as the French société anonyme of 1807 and the English limited company of 1862 have been described as limited partnerships with just limited partners.[548]

In France, the business community could rather freely choose between various degrees of limited liability before the introduction of the free incorporation of limited-liability companies. The société anonyme of 1807 remained a rare phenomenom in France before free incorporation, because members of the business community could limit the liability of investors as they saw fit by using other company forms, that is, sociétés en nom collectif, sociétés en commandite (simple), sociétés en commandite par actions nominatives, or sociétés en commandite par actions au porteur.[549] The société en commandite par actions was the

546 See *ibid.*, pp 27–29; Weber M (1889).

547 Edwards JR (2019) pp 23–24.

548 See article 19 of the Code de commerce of 1807 and sections 6 and 7 of the Companies Act, 1862.

549 For the number of companies founded between 1847 and 1860, see the table in Dougui N (1981) p 272, citing A. Moulard, Des sociétés commerciales en France, Revue contemporaine, February 1863, p 530.

functional but more flexible equivalent of a limited-liability company, the biggest difference being the unlimited liability of at least one shareholder.[550]

The chartered companies of the eighteenth century tended to be relatively large. The size of large firms was later increased by industrialisation. Free incorporation increased the number of smaller limited-liability companies.[551]

Large firms and small firms had to some extent different needs. Large companies increasingly relied on professional managers and had shareholders with conflicting interests and preferences inter se. Large companies with many shareholders could benefit from more regulation. In contrast, small companies with a small number of shareholders were closer to partnerships. Their shareholders controlled the company and could agree on its governance. These companies did not need as much regulation due to the proximity of shareholders.

One of the new design principles that emerged in nineteenth-century continental Europe was to provide for two kinds of limited-liability company forms for firms that could be either large or small. In the twentieth century, the regulation of limited-liability companies was increasingly complemented by sector-specific regulation that did not change the regulation of limited-liability companies in general but addressed the special needs of a more complex society.

When dealing with small and large companies, continental European countries and common law countries followed different paths. In continental Europe, French law served as the model for early nineteenth century company law.[552] Apart from railway companies and public utilities, few French companies raised money from the capital market in the nineteenth century.[553] German law served as the model in late nineteenth-century and early twentieth-century company law.[554]

German law. Immediately after the introduction of the normative system in 1870 (Aktienrechtsnovelle),[555] the limited-liability company form available to German firms was the AG (Aktiengesellschaft).[556] The liberalisation of the founding of companies increased the number of companies to such an extent that the

550 Dougui N (1981) p 268. Generally, see Rivière HF (1857).
551 Harris R (2013) pp 342 – 343.
552 See von Gierke O (1868) § 69.VII.A.3 p 995 and § 69.VII.A.4 p 997.
553 Lemarchand Y, Parker RH (eds) (1996) p xxvii.
554 See de Sola Canizarès F (1950) pp 50 – 53 and 57.
555 Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften of 11 June 1870.
556 Raiser T (1983) § 2.1: “Bis zum Erlaß des GmbHG im Jahr 1892 ist die Geschichte des Rechts der Kapitalgesellschaften identisch mit der Geschichte der AG.”

whole era came to be known as the "founders' period" (Gründerzeit).[557] However, many of the new ventures were unserious and the company form was abused. The company law reform of 1884[558] addressed these problems by increasing the protection of shareholders and the public. Since these changes made the AG unsuitable for small businesses, a new company form was deemed necessary.[559] The GmbH Act was adopted in 1892, making the GmbH (Gesellschaft mit beschränkter Haftung) the limited-liability company form of choice for smaller firms. The GmbH resembles a small AG but shares some of its characteristics with the partnership (offene Handelsgesellschaft, OHG) and the limited partnership (Kommanditgesellschaft, KG).[560] The GmbH has been described as a limited partnership "in which all of the parties are limited partners".[561] German law thus provided for two basic kinds of limited-liability companies with "[w]ide-ranging party autonomy for shareholders" in the GmbH.[562] The GmbH has been a success and the GmbH vastly outnumbers the AG.[563]

The existence of different company forms for large and small companies was reflected in the discourse about the role of professional management and shareholders in large companies and the discourse about the nature of the firm.

In 1917, Walther Rathenau wrote that there are independent firms distinct from the state and private individuals.[564] Moreover, there is no entrepreneur in a large established firm.[565] A large German firm is managed by its managers or

557 Raiser T (1983) § 2.2: "Die Geschichte des modernen Aktienrechts leitete die Novelle zum ADHGB von 1870 ein, welche im Zug der allgemeinen Liberalisierung die Konzessionspflicht beseitigte und durch ein System von Normativbestimmungen ersetzte, wonach jeder eine AG gründen konnte, der die gesetzlichen Voraussetzungen erfüllte. Ein außerordentlicher Aufschwung in der Gründerzeit war die Folge, der allerdings auch erhebliche Mißstände nach sich zog." The spirit of this period is illustrated in Lenin VI (1917).

558 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften. Vom 18. Juli 1884.

559 Raiser T (1983) § 2.3.

560 de Sola Canizarès F (1950) pp 60 – 61; Raiser T (1983) § 2.3: "[Die GmbH] war als kleine AG konzipiert, übernahm aber auch wichtige Züge der OHG und der KG und bildete deshalb von vorneherein eine Zwischenform."

561 Kuhn AK (1912) pp 67 – 68.

562 Fleischer H (2018e) p 688.

563 Kornblum U (2017); Chapsal F (1926) p 14: "Cette forme simple et souple de société a joué un rôle de premier ordre dans le développement du commerce et de l'industrie en Allemagne; elle est à l'heure actuelle un des facteurs les plus importants de la vie économique de ce pays."

564 Rathenau W (1917b) p 145.

565 Rathenau W (1917a) p 8: "... für die deutsche Wirtschaftsaufgabe, die auf Lohnarbeit im Sinne der Verarbeitung und Veredelung fremder Rohstoffe beruht, blieb die Dauerform des persönlichen Unternehmertums nahezu ohne Anwendung. Trotzdem ist die fiktiv gewordene Urvor-

management board.[566] Rathenau drew the conclusion that large firms should be autonomous, independent of small shareholders, and protected by the supervisory board.[567] Rathenau's work led to the doctrine of "the enterprise as such" ("das Unternehmen an sich") in Germany in the 1920s.

There are different German limited-liability company forms for companies that want to access public capital markets. Fleischer summed up the present-day alternatives available to family firms as follows: "In Germany, the Stock Corporation Act (AktG) provides the least room to manoeuvre with the iron principle of statute stringency enshrined in § 23 para. 5. This explains why German family firms aiming to access the capital market are increasingly turning from the rigid corset of the stock corporation (AG) to the softer vestments of a partnership limited by shares (KGaA), a European Company (SE) or a hybrid SE & Co. KGaA."[568]

French law. Distinguishing between two kinds of limited-liability companies was used as a model and design principle in many countries.[569] In France, the company form that resembles the GmbH the most is the SARL (la société à responsabilité limitée). While the SA (société anonyme) appeared for the first time in 1807, the SARL was created in 1925.[570] The SARL was introduced into French law in order to enable GmbH-type companies in regions that France had recovered from Germany during the First World War to continue to operate in an equivalent form under French law.[571] – One may note that the law of 1863 on the société à responsabilité limitée[572] provided for a particular form of société anonyme. Despite its similar name, the law of 1863 was not a predecessor of the law of 1925. The law of 1863 was a reaction to the Companies Act 1862 and the Treaty of 30 April 1862 that authorized British companies to freely operate in France.[573]

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stellung vom wachstumlosen, persönlichen Unternehmen, gleichwie manche andere Theorie gebliebene Urvorstellung aus den Anfängen des Unternehmertums, durch die Macht des Unbewußten lebendig und für die öffentliche Auffassung für Gesetzgebung und Rechtsprechung bestimmend geblieben."

566 Rathenau W (1917a) p 13.

567 *Ibid.*, pp 15–20; Rathenau W (1917b) pp 142–145. See also Passow R (1918) and Passow R (1907); Mäntysaari P (2010) section 5.2.7; Muchlinski PT (2013); Fleischer H (2017); Fleischer H (2018d) pp 706–707.

568 Fleischer H (2018b) p 11.

569 See, for example, Giudici P, Agstner P (2019) p 608.

570 Loi du 7 mars 1925 institution des sociétés à responsabilité limitée.

571 Chapsal F (1926) p 15; Rochat J (2018).

572 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée.

573 Tripier L (1863) pp V–VI: "Les sociétés à responsabilité limitée donnant en Angleterre de bons résultats, notre législateur s'est inspiré des dispositions de la loi anglaise sur cette matière,

The SARL was complemented by a simple company form created in 1994.[574] Société par actions simplifiée (SAS) is a company form inspired by the Delaware LLC. It is regarded as a "hybrid" company form that combines aspects of common law and civil law.[575] It is often used as the company form for wholly-owned subsidiaries.

English law. English company law chose its own path.[576] English company law traditionally has been more dispositive than continental European or even US company law.[577] In early seventeenth-century England, the freedom of association contributed to the founding of different kinds of companies.[578] Since the Companies Act 1862, corporate governance rules have been laid down in the articles of association and the dispositive Table A.[579]

Compared with German limited-liability companies, an English company is closer to a partnership. In English company law, the articles of association are regarded as a particular kind of contract.[580] English company law has left more issues to be regulated by the founders in the articles of association. The necessary mandatory rules for companies with publicly-traded shares can, to a large extent, be found in securities markets law rather than in company law.

et le décret du 17 mai 1862 ayant autorisé les sociétés anglaises à exercer leurs droits en France ..." Ducouloux-Favard C (1992) p 857: "Le Traité de libre-échange conclu le 30 avril 1862 avec l'Angleterre fit appraitre que law rigidité du droit français par rapport au droit anglo-saxon risquait de mettre les enterprises françaises en état d'infériorité par rapport aux entrepreneurs anglais." Schäffle A (1865) p 245; von Gierke O (1868) § 69.A.4 p 999; Meisel N (2004) p 23; Rochat J (2018).

574 Loi du 3 janvier 1994. Articles L227–1—L227–20 of Code de commerce.

575 Fleischer H (2018e) p 689.

576 de Sola Canizarès F (1950) pp 55–56.

577 Harris R (2013) pp 372–373.

578 von Gierke O (1868) § 69.VII.A.3 p 995: "Wenn so zunächst überall nur vereinzelte, große, speziell autorizierte und inkorporierte Gesellschaften das Aktienprinzip anwandten, deren jede nach einem besonderen Gesetz lebte, so konnte erst die Verallgemeinerung der neuen Vereinsform eine Erkenntnis dessen daß hier eine selbständige Gesellschaftsgattung sich bilde, und damit eine Gesetzgebung über das Recht des Aktienvereins bringen. Am frühesten geschah dies, wenngleich in negativer Richtung, in England, wo seitdem das Aktiengesellschaftsrecht seine besondere, von der kontinentalen verschiedene Entwicklung nahm. Unter dem Einfluß der englischen Associationsfreiheit wurden hier nämlich schon im ersten Viertel des 17. Jahrhunderts neben den privilegierten Kompanien zahllose kleine Gesellschaften auf Aktien gegründet oder auch nur projektiert, um unter den unsinnigsten Vorwänden Leichtgläubigen das Kapital zu entlocken."

579 Harris R (2013) pp 373–375.

580 See section 33 of Companies Act 2006.

It is characteristic of English company law that the Companies Act applies to big and small companies. The Companies Act, 1907[581] distinguished between private companies and public companies with a separate set of provisions for private companies. Since public companies were the default form, private companies were defined in the 1907 Act.[582] Even before the 1907 Act, lawyers could create functional equivalents of private companies in corporate practice.[583] Therefore, "[t]he private company diffused and prospered for at least three decades before it was finally introduced by the Companies Act of 1907".[584]

For a long time, UK company law norms primarily were designed with the large company in mind.[585] There could be exemptions for private companies such as "exempt private companies" under the Companies Act 1948.[586] This approach did not change until 2006. One of the objectives of the company law reform leading to Companies Act 2006 was a "Think Small First" approach.[587]

The Companies Act, 1907 was complemented by the Limited Partnerships Act, 1907 that facilitated the establishment of limited partnerships in England.[588] The limited partnership (LP) and the limited-liability company (private or public) are complemented by the limited liability partnership (LLP), a relatively new entity with limited liability for the members. The LLP was created by the Limited

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581 An Act to amend the Companies Acts, 1862 to 1900.

582 Section 37(1) of the Companies Act, 1907.

583 Harris R (2013) p 346.

584 *Ibid.*, p 352.

585 Department of Trade and Industry (2005) section 4.1, p 29: "Although the vast majority of UK companies are small, company law has been written traditionally with the large company in mind. The provisions that apply to private companies are frequently expressed as a tailpiece to the provisions applying to public companies." Sheikh S (2008) p ix: "Before 2006, companies legislation in the UK was perceived as largely Victorian and antiquated. The CA 1985 proceeded on the basis of 'think large companies first', with little attention paid ago the needs of private companies and small businesses."

586 Section 455(1) of Companies Act 1948: "In this Act, unless the context otherwise requires, the following expressions have the meanings hereby assigned to them (that is to say):— … 'exempt private company' means an exempt private company as defined by subsection (4) of section one hundred and twenty-nine of this Act; …" See even Kahn-Freund O (1944) p 59 criticising the SARL, the GmbH, and the existence of private companies under UK company law.

587 Department of Trade and Industry (2005) section 4.1, p 29; Sheikh S (2008) p ix: "The philosophy of the CA 2006 is based on the following premise: (i) 'think small first'; (ii) reduction of administrative and regulatory burdens; (iii) ensuring clarity and conciseness in the legislation; and (iv) reducing costs to companies."

588 Section 4(1) of the Limited Partnerships Act, 1907: "From and after the commencement of this Act limited partnerships may be formed in the manner and subject to the conditions by this Act provided." Section 3: "… General partner shall mean any partner who is not a limited partner as defined by this Act." Section 4(4): "A body corporate may be a limited partner."

Liability Partnership Act 2000. There were about 50,000 registered LLPs in the UK at the end of March 2018.[589]

US law. Since US company law is based on the foundations of English common law,[590] the same pattern can, to some extent, be found in the US. The traditional way to make different company forms available to different kinds of businesses is to leave the contents of the charter to be regulated by the incorporators.[591]

While company law norms are rather flexible and dispositive in the US, the mandatory provisions protecting investors in large companies with publicly-traded shares can be found in securities markets law. One of the reasons why company law norms are flexible and dispositive at the time of incorporation is the absence of a federal or state legal capital regime that would allocate power to shareholders in general meeting.[592]

However, it could be misleading to describe US company law as much more flexible than continental European company law. Much of the flexibility of US company law is consumed at the time of incorporation, because courts have chosen to interpret the constitution of the company strictly. Moreover, continental European businesses have benefited from the flexibility of the limited partnership that has been used as a functional equivalent to the limited-liability company.[593]

When Walther Rathenau described the reality of management and control in large German firms in 1917,[594] there was no similar regulatory need to discuss the

589 Davies P (2020) p 3.

590 See Berle AA, Means GC (1932) Book Two, Chapter I.

591 Angell JK, Ames S (1846) Preface: "The reader does not require to be told, that we have in our country an almost infinite number of corporations aggregate … These associations we not only find scattered throughout every cultivated part of the United States, but so engaged are they in all the varieties of useful pursuit, that we see them directing the concentration of mind and capital to the advancement of religion and morals; to the diffusion of literature, science, and the arts; to the prosecution of plans of internal communication and improvement; and to the encouragement and extension of the great interests of commerce, agriculture, and manufactures."

592 For the legal capital regime, see Mäntysaari P (2010c) sections 5.3 and 5.4; Bebchuk LA (2005). In EU company law, it was originally based on Directive 77/91/EEC (Second Company Law Directive).

593 See Lamoreaux NR, Rosenthal JL (2005) p 55; Guinnane T, Harris R, Lamoreaux N, Rosenthal J (2007).

594 Rathenau W (1917a). See also Passow R (1918) and Passow R (1907); Rathenau W (1917b); Mäntysaari P (2010) section 5.2.7; Muchlinski PT (2013); Fleischer H (2017); Fleischer H (2018d) pp 706–707.

governance of large firms in the US yet.[595] US company law was state law that left the organisation of corporate governance to be addressed by each company's statutes. Moreover, companies tended to raise funding internally rather than issue shares to the public. The dilution of share ownership and the transfer of power from shareholders to managers was not fully realised until the end of the 1920s.[596] This trend was described by Keynes.[597]

In 1932, Berle and Means built on German law and the work of Rathenau when discussing the separation of share ownership and control in large corporations.[598] Some of the issues related to the separation of share ownership and control were addressed in the Securities Act and the Securities Exchange Act. However, the 1933 and 1934 Acts did not address major issues of corporate governance such as the structure of the board and board duties.

As the 1934 Act worked its way through Congress, President Roosevelt called on experts to consider federal incorporation.[599] In 1936, Senators Joseph O'Mahoney and William Borah proposed federal incorporation, but the O'Mahoney-Borah bill was never enacted.[600]

On one hand, the lack of different company forms for large and small companies contributed to a design flaw in US company law. US company law is designed for small companies with shareholders that can control the company and agree on its governance. In reality, shareholders in large companies neither con-

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595 One may note that Dewey J (1926) discussed the notion that a corporation is a legal fiction. Bratton WW (2001) p 743: "… corporate realism disappeared without a trace after the publication of Dewey's essay. Henceforth, with Dewey, legal theory would treat corporations as reifications and address itself to their economic and social consequences. The basic realist point had been made. In addition, the conceptual underbrush was cleared away for the Berle and Means account."

596 François P, Lemercier C, Reverdy T (2015): "For [Chandler], the dilution of ownership was at the heart of the development of American big business from the end of the nineteenth century. In fact, this dilution was not fully realised until the end of the 1920s … the growth in companies until then being based on self-financing in the United States as well as in Europe." Citing Lamoreaux NR (1985). Rajan RG, Zingales L (2003) p 14: "In 1913, equity issues appear more important in France, Belgium, and Russia than in the United States. Thus, by this measure, some continental European markets seem at least as developed as the US market at that time … While the UK had a high capitalization in 1913, Belgium, France, Germany, and Sweden were all ahead of the United States."

597 Keynes JM (1926) Chapter IV on how big institutions were "socialising themselves".

598 See Berle AA, Means GC (1932) Book Four, Chapter IV, citing Rathenau W (1917b). Generally on Berle and Means, see Bratton WW (2001).

599 The website of Securities and Exchange Commission Historical Society, The Center for Audit Quality Gallery on Corporate Governance.

600 Handler RG, Liotti TF (1976) p 384.

trol the company nor can negotiate the terms of contracts laying down the terms of their mutual relationships. Power in large companies is thus allocated to directors without adequate checks and balances.[601] This created room for complementary mechanisms also known as "good corporate governance". Since 1976,[602] neoclassical economic theory has provided the narrative to give board members financial incentives to act in the interests of institutional investors, and the narrative to replace management-friendly board members with the representatives of institutional investors. Much later, the Sarbanes-Oxley Act of 2002 reflected a shift from disclosure to substantive regulation of corporate governance.

On the other, the lack of different company forms is partly addressed by the existence of different state company laws in the US. US company law traditionally has been state law rather than federal law. Delaware has won the race for large national company incorporations. Delaware company law can thus be seen as complementary to the company laws of other states. The parallel use of local state law for local firms and Delaware law for national firms can be seen as an example of regulatory dualism.[603]

Moreover, there have been other company forms in the US as well. Pennsylvania and Virginia were the first states to introduce partnership associations (1874) with limited liability and limited duration.[604] However, this company form was little used. According to Guinnane and co-authors, the reason may have been too high exposure to legal risk in the absence of case law for this new company form.[605] Until the 1980s and 1990s, businesspeople and firms in the US had little choice but to organise as partnerships or corporations with corporations becoming even more attractive because of changes in tax laws.[606] The pool of available limited-liability company forms was increased with the introduction in US states of various kinds of private limited-liability companies such as US-specific limited liability companies (LLCs) and professional limited liability companies (PLLCs) as company forms desiged to meet the needs of various kinds of SMEs and professionals. For example, a producer co-op can form

601 See also Bratton WW (2001) p 755: "Under the [contractarian] model, there is no meaningful separation of ownership and control. Since the firm represents a series of contracts joining inputs to outputs, ownership becomes an irrelevant concept … This contractarian attempt to consign Berle and Means to the scrapheap failed in short order, however."

602 Jensen MC, Meckling WH (1976); Mishel L, Davis A (2015).

603 Gilson RJ, Hansmann H, Pargendler M (2011) pp 481–482.

604 Guinnane T, Harris R, Lamoreaux N, Rosenthal J (2007) p 716.

605 *Ibid.*, p 718.

606 *Ibid.*, pp 720–722.

an LLC with investor partners or use a single-purpose LLC as a legal tool to protect the nature and brand of the co-op.[607]

Recognition of foreign company forms. The number of available company forms is increased by rules on the recognition of foreign company forms (section 2.4.2) and, in federal states, domestic company forms. For example, the recognition of Delaware corporations in other US states increases the number of available company forms in all US states.[608] The recognition of foreign companies as foreign private issuers (FPIs) increases the variety of companies that may choose an IPO in the US.[609] In the EU, the freedom of establishment[610] and the case-law of the Court of Justice of the European Union[611] allow for free incorporation in any Member State under the incorporation theory. The recognition of companies formed in a Member State of the EU increases the number of company forms available to firms doing business in the EU.[612] For example, the widespread use of the English ltd in Germany contributed to a reform of German GmbH law in 2007[613] and the adoption of simple company forms for small businesses in the Member States of the EU.[614]

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607 Lund M (2013) p 16.

608 See Latty ER (1955).

609 See Morrison & Foerster LLP (2017) p 1: "[W]e examined the filings of (i) the approximately 680 EGCs (on an aggregated basis) that completed their IPOs in the period from January 1, 2013, through December 31, 2016, and (ii) the 100 EGCs (on a standalone basis) that completed their IPOs during the year ended December 31, 2016. The survey focuses on EGCs that have availed themselves of the provisions of Title I of the Jumpstart Our Business Startups Act ("JOBS Act")." Page 3: "Of the 680 EGCs, 154 were foreign private issuers ("FPIs")." Page 4: "Of the 526 domestic companies, 87.3% were incorporated in Delaware, followed by Maryland (5.1%), Texas (1.1%), and Nevada (1.0%)." Page 6: "The largest percentage of FPI EGCs, 31.8%, were companies incorporated in the Cayman Islands. Approximately 6.5% were companies incorporated in Bermuda. These two jurisdictions are welcoming to foreign companies because they often offer favorable tax and other attributes unrelated to the underlying business operations of the issuer. Based on the sample surveyed, 30 of the 49 Cayman Islands issuers were based in China. The next largest percentage of FPI EGCs, or 14.3%, were issuers incorporated in Israel, with their primary operations in Israel." Page 8: "The U.S. securities laws permit FPIs to choose to follow U.S. or their own home country governance principles for most matters, although there are specific U.S. requirements relating to audit committees that all FPIs must satisfy."

610 Articles 54 and 49 of the Treaty on the Functioning of the EU.

611 The landmark case was C-212/97 Centros [1999] ECR I-1459. It was complemented by the subsequent cases of Überseering, Inspire Art, Sevic, Cartesio, and Vale.

612 See, for example, Mäntysaari P (2010a) section 4.4.4.

613 See § 5a GmbHG and Deutscher Bundestag, Drucksache 16/6140, 16. Wahlperiode 25.07.2007, Gesetzentwurf der Bundesregierung Entwurf eines Gesetzes zur Modernisierung des GmbH-Rechts und zur Bekämpfung von Missbräuchen (MoMiG).

614 See Giudici P, Agstner P (2019) pp 611–613.

Think small first. The existence or lack of alternative limited-liability company forms in national company law is vaguely connected to the question whether regulators should "think small first" when making new law. Obviously, the question is irrelevant where existing regulation already is designed with small firms in mind. The question is relevant where existing regulation does not provide for different limited-liability company forms for small and large firms ("one size fits all"), or where the default company law norms are designed for large companies with publicly-traded shares ("think big first").[615] "Think small first" has been part of company law discourse for some time.

In the US, the Small Business Act of 1953 was adopted to assist small businesses. Its purpose was to foster competitive markets and to address market failures. According to the Act, "[t]he essence of the American economic system of private enterprise is free competition" and "[t]he preservation and expansion of such competition is basic not only to the economic well-being but to the security of the [US]".[616]

In the EU, the Council adopted the first action programme for small and medium-sized enterprises in November 1986. The main purpose of the action programme was to prepare SMEs for the completion of the internal market by 1992.[617] The action programme was the first of many.

There have been European action programmes even in company law. The main objectives of the European Commission's 2003 Company Law Action Plan[618] were to "foster the global efficiency and competitiveness of businesses in the EU" and to strengthen shareholder rights and third party protection. This action plan mainly reflected the interests of large enterprises rather than SMEs.[619]

In March 2005, the Commission identified regulatory simplification as one of the priority actions for the EU.[620] After a December 2005 company law consulta-

615 See, for example, the discussion of the Reflection Group in Antunes JE, Baums T, Clarke BJ, Conac PH, Enriques L, Hanak AI, Hansen JL, de Kluiver HJ, Knapp V, Lenoir N, Linnainmaa L, Soltysinski S, Wymeersch EO (2011) pp 8 – 10.

616 Section 2(a) of the US Small Business Act of 1953. See Dilger RJ (2016).

617 See Commission of the European Communities (1988) p 5: "The entire Community is currently mobilized to complete the internal European market between now and 1992. This represents both an opportunity and a risk for SMEs."

618 Modernising Company Law and Enhancing Corporate Governance in the European Union – A Plan to Move Forward. Communication from the Commission, COM(2003) 284 final.

619 See *ibid*., section 3.5 on the European Private Company (EPC).

620 Better Regulation for Growth and Jobs in the European Union. Communication from the Commission, COM(2005) 97 final. See also Implementing the Community Lisbon programme:

tion,[621] the Commission shifted its company law focus from generating initiatives to simplification measures, and paid more attention to cross-border matters and reducing regulatory burdens. The goal was "to create a 'simplified business environment' starting from a 'think small first' position which recognised the central role that SMEs (small and medium-sized enterprises) play in the EU economy".[622]

In 2008, the European Commission adopted and the Council endorsed a Small Business Act for Europe.[623] The Small Business Act was a reaction to the financial crisis of 2007–2009. The Small Business Act for Europe established a set of ten principles such as "[d]esign rules according to the 'Think Small First' principle", "[f]acilitate SMEs' access to finance", and "[e]ncourage and support SMEs to benefit from the growth of markets".[624] In 2011, the Commission reviewed the Small Business Act for Europe's implementation[625] and proposed five new priority areas such as "making smart regulation a reality for European SMEs" and "paying specific attention to SMEs' financing needs".

Generally, the earlier "think small first" approaches were piece-meal approaches to regulation. "Think small first" approaches were employed in the context of regulatory areas that have their own general goals. The question has been how regulation affects SMEs and how to adapt regulation for SMEs. The objectives of SMEs have not been the starting point.[626]

In the field of company law, the "think small first" approach influenced the structure of the UK Companies Act of 2006.[627]

We can have a look at the European Model Companies Act (EMCA) to find out to what extent "think small first" is part of recent company law discourse in Europe. The EMCA was presented in 2017 by the European Model Companies Act Group, a group of academics (the EMCA Group). The EMCA is "designed as a

A strategy for the simplification of the regulatory environment. Communication of the Commission, COM(2005) 535 final.

621 European Commission, Consultation on Future Priorities for the Action Plan on Modernising Company Law and Enhancing Corporate Governance in the European Union (December 2005).

622 Hannigan B (2016) p 25.

623 "Think Small First": A "Small Business Act" for Europe. Communication from the Commission, COM(2008) 394 final.

624 *Ibid.*, p 4.

625 Review of the "Small Business Act" for Europe. Communication from the Commission, COM(2011) 78 final.

626 See also Dilger RJ (2016) on the "Small Business Act" for Europe from a US perspective and Callison W, Fenwick M, McCahery JA, Vermeulen EPM (2018) p 750 on "responsive lawmaking".

627 Department of Trade and Industry (2005) Chapter 4, p 29.

free-standing general company statute that can be enacted by Member States either substantially in its entirety or by the adoption of selected provisions".

Interestingly, the EMCA was not based on the "think small first" approach. While recognising that the companies acts of "almost all EU Member States" divide companies in two categories (such as the AG and the GmbH), the EMCA Group is still "following the one-law model … aiming at both public and private companies thereby taking into account the particular needs of typical private companies".[628] The starting point of the EMCA Group therefore is one size for all. Contrary to the long-term trend in continental Europe, the EMCA Group is betting on the convergence of the company law regulation of privately-held companies and listed companies: "The Model Law Group has decided to use a one-law model in the first place, for the sake of simplicity, to increase flexibility as the private company law model would be the default one, and to anticipate current development that private and public companies are becoming closer in terms of substantive regulation in the Member States."[629]

Companies with double bottom lines. After the turn of the millennium, many countries introduced companies with double bottom lines. The main avenues were to introduce new corporate forms to support for-profit social enterprises (such as Società Benefit or a benefit corporation)[630] and to permit existing corporate forms to choose a social mission (such as a "raison d'être", section 2.4.13). For the purposes of this book, however, company forms for for-profit social enterprises are marginal. First, they suffer from the same fundamental problem as the shareholder primacy approach and the stakeholder approach, namely the problem of how to address conflicting interests. Multiple bottom lines fail to provide the necessary guidance to managers. Something should prevail.[631] Second, the business judgment rule and protection against shareholder lawsuits enable traditional companies to take into account the relevant circumstances (section 2.4.11). Without such protection, firms would not have been able to adapt and survive in the past. Third, the better way to replace both the shareholder primacy approach and the stakeholder approach for large and small for-profit companies seems to be the use of a legal duty to act in the interests of the firm (das Unternehmen, l'entreprise, section 2.4.13).

Conclusions. The availability of many alternative company forms and different company forms for large and small firms seems to benefit firms. It is charac-

628 EMCA Group (2017) Introduction, section 3.
629 *Ibid.*, Introduction, section 8.
630 See, for example, Cummings B (2012). Italy introduced the so-called Società Benefit in 2015. Law No. 208 of 28 December 2015, article 1, subsections 376 – 382.
631 Mäntysaari P (2012) sections 6.3.3 and 6.3.5. See also Velasco J (2021).

teristic of continental European company laws. Various kinds of limited-liability company forms are complemented by various kinds of partnership forms.[632]

In the UK and the US, a small company law regime that is flexible at the time of incorporation was initially designed for small firms.[633] The particular characteristics of large public companies were addressed in securities law. As the size and intensity of the company law regime grew, it became necessary to re-think the regime's suitability for small firms. The "think small first" approach can be understood against this background.

In the EU, the EMCA Group is betting on the convergence of the company law regulation of privately-held companies and listed companies. The EMCA Group uses common law countries as a model and believes in the one-size-fits-all approach.

In the US, the Delaware company is complemented by the company forms of other US states. It is possible to choose between the Delaware company or incorporation in another state. For this reason, there is no one-size-fits-all approach in the US.

Later in this book, we will argue against the one-size-fits-all approach to regulation and propose both the use of regulatory dualism (section 6.3.12) and the development a new company form (Chapter 9).

2.4.10 Boards

The firm should organise its decision-making one way or another (section 2.3.3). Historically, collective decision-making has taken different forms. The use of boards emerged as a way to organise collective decision-making. Since there are many ways to organise a firm and collective decision-making,[634] you cannot imply anything from the word board in a comparative study. It is better to focus

632 Fleischer H, Cools S (2019) p 465: "Dennoch wäre ein Abgesang auf die Personengesellschaften als Rechtsformalternative für gemeinsame wirtschaftliche Betätigung nicht nur verfrüht, sondern auch gänzlich verfehlt. Vielmehr spielen sie in zahlreichen Ländern schon rein numerisch noch immer eine wichtige Rolle. Hiervon zeugen nicht zuletzt 23.000 OHGs, 268.000 KGs und 209.000 unternehmerisch tätige Gesellschaften bürgerlichen Rechts in Deutschland, 28.000 sociétés en nom collectif und knapp 1,4 Mio. sociétés civiles, unter ihnen mehr als eine Mio. sociétés civiles immobilières, in Frankreich, 540.000 società in nome collettivo und rund 500.000 società in accomandita in Italien sowie über eine halbe Million partnerships, gut 400.000 limited partnerships und knapp 130.000 limited liability partnerships in den Vereinigten Staaten."

633 See also Giudici P, Agstner P (2019) on Italian company law for SMEs.

634 For the contingency theory, see Woodward J (1958).

on the organisation of collective corporate decision-making in the context of management and monitoring.

Continental European roots. "The board" was not characteristic of early limited-liability companies in the first half of the nineteenth century. Questions of the limited liability of partners and the separate legal personality of the entity were more fundamental.[635] What we now call the board started to develop gradually in French company law and reached the modern stage in German company law in 1884.

Continental European company law seems to be a useful source for anyone trying to understand the organisation of collective corporate decision-making in the context of management and monitoring. Bodies consisting of many people have been used in continental Europe by communities, municipalities, the state, the church, and merchants since ancient times.[636] These practices were continued in early European companies.

Bodies consisting of many people were used when collective decision-making was organised in the chartered companies that emerged in the seventeenth century.[637] Depending on the organisation type, it was customary to allocate more power either to shareholders (in a member corporation or under Lehmann's corporation model, section 2.4.4) or to a professional administration (in a property corporation or under Lehmann's association model). While the former was characteristic of England, the latter prevailed first in the Netherlands and then in the rest of continental Europe.[638]

The move from old to new practices in continental Europe can be illustrated with the 1602 charter of Verenigde Nederlandsche Geoctroyeerde Oostindische Compagnie (the VOC).[639] The VOC was the result of the fusion of six small regional trading companies (pre-companies).

Before the fusion, each pre-company had raised capital for one expedition at a time. There was continuity, because the merchants in charge, also known as bewindhebbers, sponsored successive expeditions. In addition to bewindhebbers, each expedition had other shareholders or participanten.

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635 Article 33 of the Code de commerce (1807); Angell JK, Ames S (1846) Chapter XVII § 1 p 531.
636 See von Gierke O (1868).
637 See Lehmann K (1895) § 5; Angell JK, Ames S (1846) pp viii–ix: "… a great number of English cases; but they are generally cases of municipial corporations …" "[Kyd] assumed to treat generally of the law of corporations; but his work … is chiefly made up of authorities and precedents that relate to municipal institutions …" Angell JK, Ames S (1846) Introduction § 4 p 10.
638 Lehmann K (1895) § 5 pp 57–58.
639 Niemeijer HE (2007); Gaastra FS (2007).

The charter of the VOC was a compromise between the pre-companies. The pre-companies became departments or kamers (chambers) in the VOC. Each of the chambers[640] was allocated a fixed share of operations. The bewindhebbers of each pre-company became the bewindhebbers of the respective chamber. Above the chambers, there was a general body responsible for the general management of the VOC. It had seventeen members from the pool of the members of chambers and was therefore called "Heren XVII".[641] Meetings of committees took place between the meetings of the Heren XVII.

The VOC model imitated the organisation of the state.[642] Shareholders originally had hardly any rights but were given some rights in 1623 when three commissions of principal shareholders were established.[643]

The fact that chartered companies had a close connection to state interests was reflected in their administration. The Danish East Indian Company was administered by "nine people" identified in the octroi as N.N.N.N.N.N.N, the admiral and the vice-admiral. The nine people were appointed by the king and had a duty to be loyal to the king.[644]

With the free incorporation of limited-liability companies in the mid-nineteenth century, it became necessary for the state to regulate the administration of the company. This did not immediately mean the allocation of powers to a board. For example, "the board" was not characteristic of the société anonyme of 1807. The French laws of 1807 and 1863[645] required the existence of administrators (les administrateurs) that were shareholders. While these laws laid down the duties of administrators, they did not regulate the organisation of their

640 Amsterdam, Zeeland, Delft, Rotterdam, Hoorn, and Enkhuizen.

641 See Balk GL, van Dijk F, Kortlang DJ, Gaastra FS, Niemeijer HE, Koenders P (2007) Appendix 5 and Appendix 6.

642 Gaastra FS (2007): "The relationship between the boards of directors of the chambers and the meetings of the Heren XVII, who after all consisted of delegates from these boards, was in many respects comparable to the meetings of the States of Holland and Zeeland and the cities who delegated their administrators to the sessions of the States."

643 Gaastra FS (2007) and Lehmann K (1895) § 5 pp 57–58 on the limited rights of shareholders.

644 See the octroi of the Danish East Indian Company dated 17 March 1616 ("Artickler dett ostindiske compagnie ahnrörendis") in Lehmann K (1895) pp 93–94. According to numbers 3 and 4 of the articles, the company was administered by nine people ("nye personer"). Seven of them were appointed for an unlimited period of time. Two of them, that is, the admiral and the vice-admiral, were appointed for the duration of one voyage unless they were willing to continue for a longer period.

645 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée.

work.[646] In England, the Companies Act 1862 mentioned directors[647] but neither the Act nor Table A attached to it mentioned "the board".[648] According to Table A, the company was managed by "the directors".[649] In 1913, Frederic William Maitland, an English legal historian, used the terms "directors" and "directorate" rather than the terms "board", "the board of directors" or "board members".[650]

The term "board" or "the board of directors" subsequently entered mainstream company law and corporate governance discourse but lacked a clear universal meaning: "the board" in country A did not necessarily have the same function as "the board" in country B; a particular function could be allocated to a body called "the board" in country A but addressed in a different way in country B; and a group of functions could be allocated to one body in country A or two bodies in country B. – In 2012, the European Commission acknowledged in its company law action plan[651] the coexistence of different board models often "deeply rooted" in national legal systems and stated that it has "no intention of challenging or modifying this arrangement".[652]

In any case, whatever company law functions are allocated to bodies called "the board" and whatever is meant by "the board" in company law discourse, its roots can be traced to continental Europe.[653] It is customary to allocate particular functions to one or more collegiate bodies. There are different notions of "the board" in company law depending on the jurisdiction and the path of regulation.[654] We can have a brief look at the evolution of collective decision-making in company law and practice especially in France, Germany, and the US.

646 Article 31 of the Code de commerce (1807): "Elle est administrée par des mandataires à temps révocables, associés ou non associés, salariés ou gratuits." Article 32: "Les administrateurs ne sont responsables que de l'execution du mandat qu'ils ont reçu …"

647 Sections 42–45 of Companies Act 1862.

648 See Companies Act 1862, First Schedule, Table A, regulation 66: "The directors may meet together …"

649 Companies Act 1862, First Schedule, Table A, regulation 55: "The business of the company shall be managed by the directors …"

650 Maitland FW (1913) pp xxxix–xl.

651 Action Plan: European company law and corporate governance – a modern legal framework for more engaged shareholders and sustainable companies. Communication from the Commission, COM(2012) 740 final.

652 *Ibid.*, section 2.1.

653 See also Gevurtz FA (2004) pp 929–931.

654 One can illustrate the existence of different approaches with Gevurtz FA (2004) pp 928–929: "The … essence of the corporate board of directors comes from three underlying concepts, which involve the relationship of the directors to the shareholders, the relationship of the directors to each other, and the relationship of the directors to the corporation's executives." This ap-

France 1867. The Code de commerce in its original form was rather vague about by whom the company was managed. The company was to be managed by mandataries ("mandataires") under a revocable mandate. The mandataries either were or were not shareholders and served with or without compensation.[655]

This changed in 1863 and 1867. According to the laws of 1863[656] and 1867,[657] a société anonyme was managed by mandataries that were administrators ("administrateurs"). The mandataries were elected by shareholders in general meeting ("assemblée générale") from the pool of shareholders.[658] Moreover, under the law of 1867, the mandataries could choose one or more of their number to act as a director ("directeur") or directors.[659] The administrators deposited their shares as collateral for the fulfilment of their duties.[660]

The general meeting of shareholders appointed auditors ("commissaires") to monitor the administrators.[661] While this was a move towards the separation of functions and the distribution of work, French company law did not require the separation of share ownership, management, and monitoring.[662]

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proach does not seem to include relationships to the state (regulatory compliance) and the firm (long-term survival in the markets). Moreover, it is necessary to address more issues in corporate governance. See Mäntysaari P (2012) section 7.2.

655 Article 31 of the Code de commerce (1807): "Elle est administrée par des mandataires à temps révocables, associés ou non associés, salariés ou gratuits." Article 32: "Les administrateurs ne sont responsables que de l'execution du mandat qu'ils ont reçu …" The term mandataries is a reference to the Code civil (1804). See Article 1992 of the Code civil.

656 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée.

657 Loi du 24 juillet 1867 sur les sociétés commerciales.

658 Article 22 of the law of 1867: "Les sociétés anonymes sont administrées par un ou plusieurs mandataires à temps, révocables, salariés ou gratuits, pris parmi les associés.

Ces mandataires peuvent choisir parmi eux un directeur, ou, si les statuts le permettent, se substituer un mandataire étranger à la société, et dont ils sont responsable envers elle."

659 Article 22 of the law of 1867: "Les sociétés anonymes sont administrées par un ou plusieurs mandataires à temps, révocables, salariés ou gratuits, pris parmi les associés.

Ces mandataires peuvent choisir parmi eux un directeur, ou, si les statuts le permettent, se substituer un mandataire étranger à la société, et dont ils sont responsable envers elle."

660 Article 26 of the law of 1867. See already von Gierke O (1868) § 69.VII.A.4 p 1000 on the French law of 23 May 1863.

661 Article 32 of the law of 1867.

662 See Article 22 of the law of 1867. Kuhn AK (1912) p 116: "The Law of 1867 created three organs of corporate management, viz., the directors (administrateures) the general meeting of stockholders (assemblée générale), and the auditors (commissaires). The first general meeting elects the directors and auditors for the first year, or for a period not exceeding six years, and both classes are eligible for re-election. The directors constitute a board of management but, as a rule, delegate the actual management of the business to a committee of one or more of

The French corporate governance model was, in the words of Kuhn, "in advance of any other Continental European system prior to that time". With the benefit of hindsight, though, the French model had its faults. Kuhn criticized "the French system of a single organ of management, viz., the board of directors" as "inferior to a bi-organic control, each organ acting independently, with separate powers and responsibilities."[663] Moreover, Kuhn was critical of auditors as monitors: "A control exercised in this manner is worse than no control at all, because it gives the stockholders and creditors a false impression of security. It was for this reason, doubtless, that the Corporations Congress of 1900 expressed a desire that the control by auditors be entirely eliminated."[664]

Germany. Germany raised the bar in continental European corporate governance by separating the functions of monitoring and management in a board structure.[665] Since the reform of 1870 and the adoption of ADHGB 1870, the Aktiengesellschaft (AG) has had a mandatory two-tier board structure with a management board (Vorstand) and a supervisory board (Aufsichtsrat).[666]

The management board represents the company internally (in its dealings with company insiders) and externally (in its dealings with company outsiders).[667] The management board was and to this day remains the most important corporate body under German law.[668]

The supervisory board is a monitoring body. The evolution of the supervisory board was a case of trial and error. The ADHGB 1870 required a supervisory

their own number. If the corporate statutes specifically so permit, the management may be delegated to one or more not members of the board."

663 Kuhn AK (1912) pp 116 – 118 and pp 120 – 122.

664 *Ibid*., pp 120 – 122.

665 See also Ducouloux-Favard C (1992) p 859.

666 Article 209 f of ADHGB 1870: "Jede Aktiengesellschaft muß außer dem Vorstande einen Aufsichtsrath haben." Article 209 of ADHGB 1870: "Der Gesellschaftsvertrag muß insbesondere bestimmen: … 6) die Bestellung eines Aufsichtsrathes von mindestens drei, aus der Zahl der Aktionaire zu wählenden Mitgliedern; … 8) die Art der Bestellung und Zusammensetzung des Vorstandes und die Formen für die Legitimation der Mitglieder desselben und der Beamten der Gesellschaft; …"

667 Article 227 and Article 209 number 7 of ADHGB 1870.

668 Fischer CE (1955) pp 107 – 108: "So brachte auch hier die Neufassung des Aktiengesetzes von 1937 nur eine formelle Legalisierung der bereits seit einiger Zeit durchgängig bestehenden Verhältnisse in der Praxis, als die neuen Vorschriften der §§ 70 – 85 den Vorstand an Stelle der Aktionärversammlung materiell zum obersten Organ der AG erhoben und als in Abs III des neuen § 101 nun der Gesetzgeber auch offiziell erkannte, daß Konzerninteressen im Sinne des § 101 als 'schutzwürdige Belange' anzusehen seien, die gegebenenfalls den Gesamtinteressen einer abhängigen AG – also auch den Interessen der am Gesamtkonzern gar nicht beteiligten außenstehenden Minderheitsaktionäre – übergeordnet werden dürften."

board consisting of at least three shareholders.[669] Such a supervisory board resembled the commissaires of French company law. The powers of the supervisory board and the management board were laid down in the articles of association (Gesellschaftsvertrag, Statut).[670] However, the ADHGB 1870 failed to make the supervisory board an efficient monitoring body for many reasons: the members were limited to shareholders; the minimum number of members was three (as this company form was used not just by large firms but even by small firms); the duties of the supervisory board were not clearly set out in the ADHGB 1870; many supervisory boards took a management role; and the liability of supervisory board members was very limited.[671]

The function of the supervisory board was improved in the company law reform of 1884.[672] Under the ADHGB 1884, non-shareholders could be appointed to the supervisory board,[673] the functions of the supervisory board and the management board were separated by mandatory provisions of law,[674] a person could not be member of both boards,[675] the supervisory board was prohibited from delegating its duties,[676] board members were made to observe mimimum standards

669 Article 209 of ADHGB 1870: "Der Gesellschaftsvertrag muß insbesondere bestimmen: ... 6) die Bestellung eines Aufsichtsrathes von mindestens drei, aus der Zahl der Aktionaire zu wählenden Mitgliedern; ... 8) die Art der Bestellung und Zusammensetzung des Vorstandes und die Formen für die Legitimation der Mitglieder desselben und der Beamten der Gesellschaft; ..."

670 Article 209(1) of ADHGB 1870: "Der Inhalt des Gesellschaftsvertrages (Statut) ..." Kuhn AK (1912) p 70: "Such statutes or regulations establish the powers and compensation of the supervising council (Aufsichtsrath) and directorate (Vorstand) ..."

671 Lutter M (2007) p 392.

672 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften. Vom 18. Juli 1884.

673 Article 224 of ADHGB 1884: "Die für den Aufsichtsrath einer Kommanditgesellschaft auf Aktien in den Artikeln 191 und 192 gegebenen Bestimmungen finden auf den Aufsichtsrath einer Aktiengesellschaft Anwendung."

674 Article 227(1) of ADHGB 1884: "Die Aktiengesellschaft wird durch den Vorstand gerichtlich und außergerichtlich vertreten." Article 225(1) of ADHGB 1884: "Der Aufsichtsrath hat den Vorstand bei seiner Geschäftsführung in allen Zweigen der Verwaltung zu überwachen und zu dem Zweck sich von dem Gange der Angelegenheiten der Gesellschaft zu unterrichten. Er kann jederzeit über dieselben Berichterstattung von dem Vorstande verlangen und selbst oder durch einzelne von ihm zu bestimmende Mitglieder die Bücher und Schriften der Gesellschaft einsehen, sowie den Bestand der Gesellschaftskasse und die Bestände an Effekten, Handelspapieren und Waaren untersuchen. Er hat die Jahresrechnungen, die Bilanzen und die Vorschläge zur Gewinnvertheilung zu prüfen und darüber der Generalversammlung der Aktionäre Bericht zu erstatten."

675 Article 225a(1) of ADHGB 1884: "Die Mitglieder des Aufsichtsraths dürfen nicht zugleich Mitglieder des Vorstandes oder dauernd Stellvertreter derselben sein ..."

676 Article 225(4) of ADHGB 1884: "Die Mitglieder des Aufsichtsraths können die Ausübung ihrer Obliegenheiten nicht anderen Personen übertragen."

("die Sorgfalt eines ordentlichen Geschäftsmannes"),[677] and members of each board were made jointly and severally liable as members of a collegiate organ (see section 2.4.4).[678] The personal nature of the obligations of each board member and each board member's liability were increased by the prohibition to delegate duties.[679]

Since these changes made the AG unsuitable for small firms, a new limited-liability company form was deemed necessary for most firms (section 2.4.9).[680] This led to the adoption of the GmbH Act in 1892.[681] The GmbH became the most important limited-liability company form in Germany. It has no statutory "board". Instead, it has one or more managing directors (Geschäftsführer).[682] The managing directors represent the company in its dealings with company outsiders and insiders.[683] If there are two or more managing directors, they act as a collegiate body, unless the articles of association provide otherwise.[684] A GmbH can have a sole shareholder who acts as the sole managing director.[685]

Today, if a GmbH as a rule has more than 500 employees, it must have a supervisory board with a third of the seats allocated to employee representatives. This duty was introduced in the Betriebsverfassungsgesetz of 1952 and is now based on the Drittelbeteiligungsgesetz of 2004.[686] In practice, the vagueness of

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677 Article 226(1) of ADHGB 1884: "Die Mitglieder des Aufsichtsraths haben bei Erfüllung der ihnen nach Artikel 225 zugewiesenen Obliegenheiten die Sorgfalt eines ordentlichen Geschäftsmanns anzuwenden." Article 241(2) of ADHGB 1884: "Die Mitglieder des Vorstandes haben bei ihrer Geschäftsführung die Sorgfalt eines ordentlichen Geschäftsmanns anzuwenden."

678 Article 226(2) of ADHGB 1884: "Dieselben sind der Gesellschaft neben den Mitgliedern des Vorstandes persönlich und solidarisch zum Ersatze verpflichtet, wenn mit ihrem Wissen und ohne ihr Einschreiten entgegen den gesetzlichen Bestimmungen ..." Article 241(3) of ADHGB 1884: "Mitglieder, welche ihre Obliegenheiten verletzen, haften der Gesellschaft solidarisch für den dadurch entstandenen Schaden ..."

679 Lutter M (2007) p 392: "Um aber die fachliche Kompetenz des Aufsichtsrats zu stärken, wurden in auch Nichtaktionäre zugelassen ... Zugleich wurde die Möglichkeit einer Übertragung der Aufgaben eines Mitglieds auf andere Personen, seien sie auch Mitglieder des gleichen Aufsichtsrats, untersagt (Art. 225 IV ADHGB 1884) und damit der höchstpersönliche Character des Amtes begründet."

680 Raiser T (1983) § 2.3: "Diese Verschärfungen machten die AG für kleinere Unternehmen ungeeignet. Auf der anderen Seite entstand ein Bedürfnis, auch solchen eine Gesellschaftsform zur Verfügung zu stellen, welche die persönliche Haftung ausschloß. Daraus entstand die GmbH."

681 Gesetz betreffend die Gesellschaften mit beschränkter Haftung (GmbHG).

682 § 6(1) of the GmbHG: "Die Gesellschaft muß einen oder mehrere Geschäftsführer haben."

683 § 35(1) of the GmbHG.

684 § 35(2) of the GmbHG.

685 § 35(3) of the GmbHG.

686 § 1 of Gesetz über die Drittelbeteiligung der Arbeitnehmer im Aufsichtsrat (Drittelbeteiligungsgesetz, DrittelbG). For GmbHs, see § 1(1) number 3 of the DrittelbG.

the threshold (as a rule more than 500 employees, "in der Regel mehr als 500 Arbeitnehmern") and the absence of effective sanctions for the breach of this rule (a remark by the statutory auditors)[687] have meant that many GmbHs have incentives to choose non-compliance.

France 1966. The German board structure was used as a model in France. The law of 1966,[688] the first fundamental revision of French company law after the law of 1867, introduced to the société anonyme a supervisory board (conseil de surveillance) and directorate (directoire) as an alternative[689] to the traditional management by a board of directors (conseil d'administration)[690] and president (presidént) chosen by the board from its members.[691] Like the German GmbH, the SARL (la société à responsabilité limitée), founded under the law of 1925,[692] was managed by one or more managers (le gérant or les gérants) but had no board of directors.[693] The société par actions simplifiée (SAS) has no board.

The law of 1966 increased discretion for the SA. Since 1966, France has permitted the SA to adopt either a one-tier (unitary) board model or a two-tier board model.

It used to be characteristic of French corporate practice to combine the roles of the chairman of the board of directors and president in public limited-liability companies with a one-tier board. Power was then concentrated in the hands of the Président Directeur Général ("le PDG").[694] This changed when the

687 § 321 HGB.

688 Loi n°66 – 537 du 24 juillet 1966 sur les sociétés commerciales (Law 66 – 537 of 24 July 1966 on commercial companies). See, for example, Rawlings BM (1975).

689 Article 118 of the law of 1966.

690 Article 89 of the law of 1966.

691 Article 110 of the law of 1966.

692 Loi du 7 mars 1925 institution des sociétés à responsabilité limitée.

693 Article 24 of the law of 1925: "Les sociétés à responsabilité limitée sont gérées par un ou plusieurs mandataires associés ou non associés, salariés ou gratuits …" Chapsal F (1926) p 53; Rawlings BM (1975). For the liability of managers, see article 25 of the law of 1925: "Les gérants sont responsables, conformément aux règles du droit commun, individuellement ou solidairement suivant les cas, envers la société et envers les tiers, soit des infractions aux dispositions de la présente loi, soit des violations des statuts, soit des fautes commises par eux dans leur gestion."

694 The Economist, In praise of the splits, 11 February 2016: "Since the Vichy government in the second world war, corporate France has concentrated clout in an over-mighty Président Directeur Général, 'le PDG', just as in politics power has been centralised in the president's hands. 'We have a cultural bias, we love having one person at the top, we love to personify power,' admits the chairman of a large French firm. 'The PDG was God,' adds the chairman of another, who says conservative corporate culture makes quick change impossible."

law of 2001[695] made it easier to separate the two roles in listed companies: "[F]rom 1966 to 2001 French firms with a unitary board structure were required to have the same individual hold the two positions of CEO and chairman. The two positions could be separated only by amending the corporate charter to adopt a two-tier board structure. However, via legislation enacted in 2001, French firms with a unitary board structure gained the freedom for the board to separate – or to unify – these two major corporate positions at any time without requiring input from shareholders or the need to shift to a two-tiered board structure."[696]

England. English company law traditionally has been more laissez-faire than continental European company law and it was more laissez-faire than US company law in the late nineteenth and early twentieth centuries.[697] The laissez-faire approach has long roots. In early seventeenth-century England, the freedom of association made it possible to found different kinds of companies.[698] Compared with German limited-liability companies, an English company is closer to a partnership and its articles of association are regarded as a particular kind of contract.[699] English company law has left more issues to be regulated by the company in the articles of association. This is reflected in the regulation of the board or "directors".

The Companies Act 1862 provided for directors but left their duties and organisation largely unregulated. According to Table A that contained the default articles of association, "[t]he business of the company shall be managed by the directors" (55), "[t]he directors may elect a chairman of their meetings" (67), and "[t]he directors may delegate any of their powers to committees consisting of such number of members of their body as they think fit" (68). The Companies Act 1900 did not change the law in this respect.

The regulation of directors was therefore dispositive before the articles of association had been fixed, but the provisions of the articles of association were

695 Loi n° 2001–420 du 15 mai 2001 relative aux nouvelles régulations économiques.

696 Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 366. See also p 369 on two-tier boards and board structure changes.

697 Harris R, Lamoreaux NR (2019).

698 See already von Gierke O (1868) § 69.VII.A.3 p 995 on freedom of association and general incorporation: "Am frühesten geschah dies, wenngleich in negativer Richtung, in England, wo seitdem das Aktiengesellschaftsrecht seine besondere, von der kontinentalen verschiedene Entwicklung nahm. Unter dem Einfluß der englischen Associationsfreiheit wurden hier nämlich schon im ersten Viertel des 17. Jahrhunderts neben den privilegierten Kompanien zahllose kleine Gesellschaften auf Aktien gegründet oder auch nur projektiert, um unter den unsinnigsten Vorwänden Leichtgläubigen das Kapital zu entlocken."

699 See section 33 of Companies Act 2006.

mandatory for shareholders and directors until they were amended. In corporate practice, corporate powers were vested in the directors.[700]

USA. Generally, US company law has its roots in English common law.[701] It developed in corporate practice. US company law seems to have contributed surprisingly little to the development of the board.

In the first third of the nineteenth century, the US economy was still pre-industrial. Manufacturing became well established in the mid-nineteenth century leading to fast economic development. The US economy outgrew English common law that could no more provide a sufficient basis for US company law. For example, Angell and Ames pointed out at the time that the limited liability of partners was accepted in France and the US but not in England.[702]

Angell and Ames distinguished between various classes of companies.[703] In the first edition of their magmum opus (1832), they described "joint stock companies" as companies that were "composed of persons who seldom know any thing of the business of the company, but who leave the management of it entirely to a body of directors, and are contented with receiving such dividends as the directors think proper to make".[704] The existence of such companies and the faster development of both legislation and practices in the US[705] may have had a connection to the large number of successful tradesmen who had excess wealth to invest.[706]

700 See Guinnane T, Harris R, Lamoreaux N (2017).

701 See Angell JK, Ames S (1846) Introduction § 1 where the writers refer to Kyd. See also Berle AA, Means GC (1932) Book Two Chapter I.

702 See Angell JK, Ames S (1846) Chapter 1 § 3 pp 37–38: "Though the English law does not admit of partnerships with a restricted responsibility, they have been established in different parts of the continent, and in this country. In France, by the celebrated ordinance of 1673, la Société en commandite, or a limited partnership, was introduced for promoting the interests of the mercantile community and the benefit of the public … This peculiar kind of partnership has been continued by the new commercial code of France … It is the first instance, says Kent, in the history of the legislation of New York, that the statute law of any other country than Great Britain, has been closely imitated and adopted." See also Arner D (2002) pp 53–54 on Angell and Ames citing the opinion of Chief Justice Marshall in United States Bank v. Planters' Bank of Georgia 22 U.S. (9 Wheat.) 904 (1824).

703 See Arner D (2002) pp 26–27: "Angell and Ames suggested the early division of these economic companies was into two classes: (1) regulated companies and (2) joint stock companies." According to Arner, "Angell and Ames may have taken this division from Adam Smith who used the same general divisions in his own classifications."

704 Angell JK, Ames S (1832) Chapter 1 Sec. I p 32.

705 See Bratton WW (1989) p 1485; Arner D (2002) pp 24 and 44.

706 See Arner D (2002) p 27 on Cooke.

In corporate practice, freedom of contract and the irrevocable nature of the corporate charter had a major impact on corporate governance. In the mid-nineteenth century, "the doctrine instantiated group values. Corporate law favored strong central direction of assets, barred stockholders from a direct managerial voice, and accorded management considerable assurances of tenure."[707]

In the legal sense, Angell and Ames built on the common law notions of property, contract, and agency, as well as the doctrine that the powers of the corporation and their allocation were based on the wording of the charter.[708]

The consequence of the strict application of the principles of agency was that all powers in the company were vested in a body of directors, shareholders did not control the company, and there was no mandatory separation of monitoring and management at board level.

Continental European company law does not seem to have played any major role in US company law discourse before the end of the nineteenth century.[709] In the twentieth century, legal scholarship relating to the organisation of collective corporate decision-making took a step back as continental European company law theory lost its short-lived relevance in English-speaking countries. Company law theory was later largely replaced by the reception of economic theories of the firm[710] that reflected eighteenth-century English common law.

The weak separation of monitoring and management at what we today call "board" level in US company law reflects path-dependency and the choice of theory. While monitoring and management have been separated at board level since 1884 in Germany, US securities law relied on public disclosures. The notion of the monitoring board was introduced to US company law scholarship by Melvin Eisenberg as late as in 1976.[711] The lack of separation of monitoring and man-

707 Bratton WW (1989) p 1485.

708 The Case of Sutton's Hospital, 5 Co. Rep. 23 (1526–1616), reprinted at 285 (1826). This 1612 case is generally regarded as one of the most important early cases on corporations. See Arner D (2002) p 29.

709 See Kuhn AK (1912); Maitland FW (1913); Dewey J (1926); Berle AA, Means GC (1932). It was rather absent in Angell JK, Ames S (1846) that largely built on common law and Kyd.

710 See, for example, Hansmann H, Kraakman R (2001) proclaiming that "[t]he triumph of the shareholder-oriented model of the corporation over its principal competitors is now assured".

711 Eisenberg MA (1976) was based on four articles such as Eisenberg MA (1969). Bratton WW, Wachter ML (2008) p 145: "... Melvin Eisenberg's book The Structure of the Corporation ... synthesized and materially advanced a generation of thinking about the deficiencies of the received legal model of the corporation. For Eisenberg, the inherited model could not be dismissed as antique but serviceable. If structural barriers prevented shareholders from controlling managers, then the structure of the board of directors needed renovation so that the board became an ef-

agement in company law was addressed in securities law after the Enron scandal. Board committees and "independent" members were required by the Sarbanes-Oxley Act of 2002 and corporate governance codes. This approach was fundamentally different from the continental European approach.[712]

The unitary board model without clear separation of monitoring and management but with all corporate powers vested in the board – or directors – made US boards more vulnerable. Management-friendly US boards became the main target of institutional investors who used their increasing share ownership and neoclassical economic theory to change the narrative of business, board culture, and board composition to their own benefit. Whereas legal constraints in countries with a two-tier board model contributed to path dependency and continued reliance on the managerial business model,[713] unitary boards without clear separation of monitoring and management were not as protected. This made it easier to replace the managerial business model with the financial business model as institutional investors grew in power.

It is useful to study the evolution of US corporate boards a bit more to understand how the modern contractual theory of the firm, the agency theory of the firm, and the theory of shareholder primacy are embedded in traditional common law. The fact that they are so embedded should make it more difficult to transplant them into continental European company law systems without creating legal or theory irritants. We can have a look at how Angell and Ames discussed boards in 1832.

US boards according to Angell and Ames. Angell and Ames built on the common law notions of property, contract, and agency, as well as the doctrine that the powers of the corporation and their allocation were based on the wording of the charter.[714] Common law was later recycled in the notion of the firm as a contract, in the agency theory, and in the property rights theory.[715]

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fective monitor of management performance. Eisenberg's monitoring model of the board of directors has ever since been the main focus of legal corporate governance."

712 See, for example, Mäntysaari P (2005) pp 394–395.

713 See, for example, André T Jr (1998).

714 The Case of Sutton's Hospital, 5 Co. Rep. 23 (1526–1616), reprinted at 285 (1826). This 1612 case is generally regarded as one of the most important early cases on corporations. See Arner D (2002) p 29.

715 Bratton WW (1989) p 1513: "The new economic theory presented something new to the world of neoclassical microeconomics when its neoclassical variant appeared in the 1970s ... But transposed to a legal context, the assertion was less new than it looked. Contract always has figured into the legal theory of the firm. The new economic theory confirms and repeats legal history when it asserts that the corporation 'is contract.'" See Jensen MC, Meckling WH (1976).

When Angell and Ames wrote their famous book, the notion of the board was still rather vague in US company law. It meant no more than a body consisting of two or more people.[716] Angell and Ames mentioned: “a special board or body”;[717] “a particular board or select body”[718] “a separate board of visiters”;[719] “a board of visitors”;[720] “the board of examiners”;[721] “the board of trustees”;[722] a board consisting of “the major part” of twenty-three directors;[723] “a special body or board of directors”;[724] “the board of president and directors”;[725] and, on one and the same page, “the board of directors”, “the board of agents”, “the managing board of a corporation”, “boards of directors or agents”, and “the board”.[726]

Corporate power and the actual function of such a body depended on the charter or by-laws. The charter or by-laws could vest powers in agents such as directors. According to Angell and Ames, a “board of directors” was a “board of agents” and a “board of directors or agents”.[727] Angell and Ames even mentioned “a joint agency as of directors of a bank”. [728]

When powers were vested in the directors, the powers of shareholders were consumed: “In modern corporations created by statute, the charter ordinarily contemplates the business of the corporation to be transacted exclusively by a special body or board of directors; and the acts of such body or board, evidenced by a legal vote, are as completely binding upon the corporation, and as complete authority to their agents, as the most solemn acts done under the corporate seal”.[729]

Angell and Ames mentioned boards that had management functions and boards that had supervisory functions.

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716 See the octroi of the Danish East Indian Company dated 17 March 1616 (“Artickler dett ostindiske compagnie ahnrörendis”) in Lehmann K (1895) pp 93–94. According to numbers 3 and 4 of the articles, the company was administered by nine people (“nye personer”).

717 Angell JK, Ames S (1846) Chapter VII § 5 p 192.

718 *Ibid.*, Chapter IX § 2 p 259.

719 *Ibid.*, Chapter V p 126.

720 *Ibid.*, Chapter XIX § 4 p 621.

721 *Ibid.*, Chapter XX § 2 p 633.

722 *Ibid.*, Chapter X § 5 p 355.

723 *Ibid.*, Chapter IV § 9 p 101.

724 *Ibid.*, Chapter IX § 3 pp 265–266.

725 *Ibid.*, Chapter IX § 3 p 265.

726 *Ibid.*, Chapter IX § 6 p 282.

727 *Ibid.*, Chapter IX § 6 p 282.

728 *Ibid.*, Chapter IX § 9 p 299.

729 *Ibid.*, Chapter VIII § 3 p 203.

For example, Angell and Ames wrote that the Bank of Genoa was “under the management of a board”.[730] They mentioned the “managing board of the corporation”[731] and “a board of directors authorized to conduct the affairs of the company”.[732] The charter of a certain company “provided that its affairs shall be managed and conducted by twenty-three directors, of whom the major part shall constitute the board”.[733]

According to Angell and Ames, a body did not have any right to interfere in activities that were allocated to another agent or body: “If the charter has invested a particular board, or select body, with power to manage the concerns of the corporation, the body at large have no right to interfere with the doings of these their charter agents; and courts will not, even upon a petition of a majority of the members compel the board to do any act contrary to their own judgment.”[734]

Such a right could nevertheless be based on the wording of the charter or by-laws. The board could monitor an agent depending on the charter or by-laws. Angell and Ames illustrated this with a case: “The agent of a manufacturing corporation was empowered by its by-laws to manage the affairs of the corporation committed to his care, and to exercise the power entrusted to him according to his best ability and discretion, and promptly to collect all assessments and other sums that should become due to the corporation, and to disburse them according to the order of the board of directors, who were made a board of control over him; it was held, that, if the board of directors did not dispose to control his proceedings, the agent had authority …”[735]

If an agent or a body was empowered to manage the company, it had a duty to manage the company without delegating its powers: “And where by a bank charter the power of discounting notes and bills was vested in the board of directors, it was held, in Louisiana, that they could not delegate this trust to an agent or agents of the board.”[736] “Nor can a president and cashier or a bank, nor a ‘finance-committee’ of the board of directors, as such merely, execute a mortgage of the lands of the corporation, without the concurrence of the board of directors.”[737]

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730 *Ibid.*, Chapter I p 46.
731 *Ibid.*, Chapter VII § 6 p 193.
732 *Ibid.*, Chapter IX § 9 p 294.
733 *Ibid.*, Chapter IV § 9 p 101.
734 *Ibid.*, Chapter IX § 2 p 259.
735 *Ibid.*, Chapter IX § 9 p 291.
736 *Ibid.*, Chapter IX § 1 p 257.
737 *Ibid.*, Chapter IX § 9 p 297.

The powers of a corporate body such as the board could also be based on a statute: “In the subsequent case of Fleckner v. U. S. Bank … Mr. Justice Story, in delivering the opinion of the court, observes: ‘Whatever may be the original correctness of this doctrine, as applied to corporations existing by the common law, in respect to which it has been certainly broken in upon in modern times, it has no application to corporations created by statute, whose charters contemplate the business of the corporation to be transacted exclusively by a special body or board of directors. And the acts of such body or board, evidenced by a written vote, are as completely binding upon the corporation, and as complete authority to their agents, as the most solemn acts done under the corporate seal.’”[738]

In such a case, agency laws did not necessarily apply: “In Massachusetts, … a board of bank directors is a body recognized by the laws, and do not exercise a delegated authority in the sense of the rule which forbids an agent, without express power so to do, to delegate this authority.”[739]

Conclusion. What can we learn from the emergence of boards as a way to organise collective decision-making?

To start with, there is probably something to learn from continental European company law. Continental European legislators have tried to optimise the structure and function of the board since the late nineteenth century. UK and US legislators largely have left this question to corporate practice and the courts.

Moreover, while boards are not always necessary, there are things that are necessary. The state wants somebody to be responsible for regulatory compliance in relation to the state, and somebody should represent the company in its dealings with company outsiders and insiders.[740] The firm needs to organise its decision-making, improve the quality of its decision-making, and reduce the risk of abuse. Such functions may benefit from collective decision-making and a board structure. To compare comparable things, it is better to focus on how such functions are addressed rather than start with an *idée fixe* about the notion of the board. There are various things that must be addressed one way or another in the context of corporate governance.[741]

The board is a body designed to facilitate collective decision-making. Its other functions cannot be derived from the notion of “the board”.

Boards seem to benefit large firms and boards seem to be the rule for companies with a large organisation and many shareholders. Boards are not deemed

738 *Ibid.*, Chapter IX § 3 pp 265–266.
739 *Ibid.*, Chapter IX § 1 pp 257–258.
740 Mäntysaari P (2010a) Chapter 8; Mäntysaari P (2012) Chapter 7.
741 Mäntysaari P (2005) Chapter 2.

as necessary for small firms that choose the company form of a limited partnership, GmbH, SARL, or private company.

The board can be a management body, a monitoring body, or both. Both management and monitoring can benefit from a board structure. This is the case with the German Aktiengesellschaft and the French société anonyme.

If the board is a management body, shareholders generally do not make good board members in their capacity as shareholders. Professional managers tend to be a better alternative. A particular shareholder may of course have private characteristics that make the shareholder suitable for a management role as a provider of "ancillary services".

If the board is a monitoring body, shareholders generally do not make good monitors as board members in their capacity as shareholders. Neither do the managers that should be monitored. To improve the quality of monitoring by mixed monitoring, the monitoring body can be complemented by company insiders and outsiders. Moreover, a particular shareholder may again have private characteristics that make the shareholder suitable for a monitoring role.

To ensure that management and monitoring are separated, the monitoring body should not manage the company. This can be achieved if the monitoring body monitors the management body rather than management.

Company law theory in English-speaking countries, economic theories of the firm, and the mainstream principal-agent theory seem to reflect eighteenth-century English common law.

2.4.11 Addressing Self-Interested Decision-Making, Dead-Lock Situations, Standards, and Sanctions

Legal norms are a way to balance conflicting interests.[742] Addressing conflicts of interest belongs to the core tasks of company law. Since company law facilitates collective decision-making, it addresses situations of self-interested decision-making. There are standards of conduct and sanctions that are enforced when the required standards are not complied with. Moreover, company law ensures the internal coherence and general resilience of the regulatory framework by providing solutions to dead-lock situations.

Dealing with self-interested decision-making. Several company law practices were developed in the late nineteenth and early twentieth century to address situations of self-interested decision-making. For example, such practices in-

742 Heck P (1914).

cluded: the separation of functions (section 2.4.5); board structures (section 2.4.10); and transparency (section 2.4.5 on the separation of functions, section 2.4.6 on auditing, section 2.4.7 on the public disclosure of information, and section 2.4.8 on accounting standards). Moreover, they included various kinds of conduct norms and sanctions.

The financial business model that started to gain popularity in the 1970s brought new practices that worked in a new way. It was based on the assumption that managers and board members act in their own interest and encouraged them to maximise their own financial rewards. We will first have a look at the earlier regulatory practices.

The separation of functions. The separation of functions is an important design principle for dealing with self-interested decision-making.

The underlying assumption is that a person should not act as or on behalf of the company when there is a conflict between the person's own interests and the interests of the company. Moreover, a person should not act as or on behalf of the company in its dealings with the person himself or herself.

This design principle can be applied to many steps in the decision process. Since there is a distinction between the initiation, ratification, implementation, and monitoring of decisions,[743] it can be applied to corporate decision-making in its various forms, the representation of the company in its internal dealings, and the representation of the company in its dealings with third parties. Moreover, this principle can be applied to an individual or a corporate body.

In continental Europe, the roots of this design principle can be found in the norms of general civil law. Early company law was embedded in civil law provisions of contract law and representation. For example, the French Code de commerce of 1807 required the company to be managed by mandataries.[744] The French term "mandataire" has a particular meaning in the Code civil.[745] The more specific provisions of the Code de commerce on mandataries complemented the more general provisions of the Code civil.[746] The French law of 1863[747] prohibited administrators from participating in the company's business ventures for their own private benefit.[748]

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743 Fama EF, Jensen MC (1983a) p 303.

744 Article 31 of the Code de commerce (1807). See also Article 1 of Loi du 23 mai 1863 sur les sociétés à responsabilité limitée.

745 Article 1992 of the Code civil.

746 Article 32 of the Code de commerce (1807).

747 Loi du 23 mai 1863 sur les sociétés à responsabilité limitée.

748 Article 23 of the law of 1863: "Il est interdit aux administrateurs de prendre ou de conserver un intérêt direct ou indirect dans une opération quelconque, faite avec la société ou pour son

Moreover, the separation of functions is a way to address the classic who-monitors-the-monitors problem.[749]

Board structures. Boards and board structures are a particular way to address the problem of self-interested decision-making by separating the functions of corporate bodies. There is separation of work between the general meeting of shareholders and the board, and between board members.

Shareholders in their capacity as shareholders customarily have a right to vote although they are self-interested. However, the design principle still applies, since it is common practice to limit the powers of shareholders and ensure that the contents of decisions taken by shareholders as a corporate body are managed by the board.[750]

To address the problem of self-interested decision-making at board level, it is customary to use either a two-tier board model or the use of board committees. In continental Europe, early examples of legislative acts that relied on two-tier board structures to address the problem of self-interested decision-making include the German company law reforms of 1870 and 1884.[751] To name a modern example of board committees, both the NYSE and Nasdaq require the majority of directors on corporate boards to be independent, and that only independent directors serve on the audit and compensation committees. Board committees and independent members were required by the Sarbanes-Oxley Act of 2002.

As regards the separation of functions and the use of board structures, the acceptance of self-interested decision-making seems to be higher in the US than in continental Europe. The main rule in US corporate practice has been that board members are appointed by the board[752] that also decides on the remuneration of board members.[753] Moreover, the board of directors can have executive members, and the CEO acts as chairman of the board in many companies.[754]

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compte, à moins qu'ils n'y soient autorisés par l'assemblée générale pour certaines opérations spécialement déterminées."

749 Quis custodiet ipsos custodes?

750 Generally, see Mäntysaari P (2005).

751 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften. Vom 18. Juli 1884.

752 See nevertheless § 8.03 of Model Business Corporation Act (2016 Revision) (December 9, 2016).

753 See § 8.11 of Model Business Corporation Act (2016 Revision) (December 9, 2016): "Unless the articles of incorporation or bylaws provide otherwise, the board of directors may fix the compensation of directors."

754 Spencer Stuart (2018); Webber D (2018) p 113.

Board committees with members assumed to be "independent" have been used to address the problem of self-interested decision-making in these cases.[755]

Dealing with dead-lock situations. There are sometimes dead-lock situations. The risk of a dead-lock situation may be higher in countries that leave much of corporate governance to be regulated in the company's by-laws or articles of association, or when there are high quorum requirements for decision-making in a corporate body. The risk of a dead-lock situation is lower when the acceptance of self-interested decision-making is higher.

For example, the risk of dead-lock situations has been reduced in France and Germany by addressing the risk in company law statutes. In the US, it is reduced by the acceptance of more self-interested decision-making under the unitary board model. Common law countries rely more on corporate practice and leave addressing the risk of dead-lock situations to be regulated in the company's by-laws or articles of association.[756]

Dead-lock situations can be addressed in the following five main ways.

First, countries can accept some self-interested decision-making. For example, this approach has been used in US board practice under the unitary board model.

Second, countries can use the separation of functions. Dead-lock situations in one corporate body can be dealt with internally in the company if there is separation of functions between different bodies and another body is responsible for taking the decision in the event that a body is unable to take it.

When this alternative is used, the body that is responsible for monitoring can take a decision when the body responsible for management cannot or should not take it. For example, under the two-tier board model, the supervisory board should decide in the event that the management board should not take the decision because of conflicts of interest.[757] Shareholders in general meeting can decide where the board cannot. Alternatively, a body can appoint new members to the body that is dead-locked. Preventing dead-lock situations can belong to

755 For a different explanation, see, for example, Roth M (2013) p 797: "The independent director paradigm was invented in countries in which boards were not subject to mandatory co-determination."

756 Duke Law Journal (1972) p 654: "Although providing that disputes arising among shareholders or directors of a corporation must be settled by the principle of majority rule, the typical state statute also allows shareholders to establish corporations whose charters or by-laws permit: (1) the even division of voting shares and board membership between opposing factions; or (2) the vesting of veto powers in minority shareholders; or (3) the setting of high voting requirements for shareholder or director action. As a result of a shareholders' agreement embodying such provisions, the possibility of corporate deadlock is greatly enhanced."

757 See, for example, § 78 AktG and § 112 AktG; Wasserbäch EL (2018).

the ancillary services of shareholders.[758] Shareholders or the general meeting may be permitted to take the decision when it cannot be taken by other corporate bodies.

Third, the risk of dead-lock situations in the ordinary course of the company's internal decision-making can be reduced if there is a sufficient number of members in a collegiate body and the chairman's vote breaks a tie.

Fourth, countries can ensure that a member of a body or bodies has the power to decide under circumstances in which an urgent decision is necessary to protect the company against harm.

Fifth, countries can ensure that in the absence of an internal decision-making procedure or body that can take the decision, the court or a regulatory or supervisory authority can decide.

Conduct norms and sanctions. There is a distinction between conduct norms and sanctions, or between "standards of conduct" and "standards of review".[759] Standards of conduct and standards of review converge, where the latter (sanctions) are effectively aligned with the former (conduct norms).

Sanctions for certain conduct imply that the conduct is prohibited and make an express conduct norm superfluous, provided that the sanctions change behaviour and sufficiently hamper the conduct in fact.[760] Where a conduct norm is not backed by effective sanctions, a party may opt for non-compliance and the conduct norm is diluted. In company law, conduct norms are diluted and not complemented by effective sanctions.

Such traditional practices were complemented or replaced by a focus on positive financial rewards under the financial business model.

There is no room to discuss the rich regulation in this area in detail.[761] We can have a brief look at some conduct norms and sanctions as well as the role of positive financial rewards.

758 Mäntysaari P (2010a) p 192; Mäntysaari P (2012) p 110.

759 Eisenberg MA (1993) p 462: "The distinction between conduct rules and decision rules, which can be found in Bentham, has been developed and trenchantly analyzed by Meir Dan-Cohen in his important article, Decision Rules and Conduct Rules: On Acoustic Separation in Criminal Law." Eisenberg refers to Jeremy Bentham's 1948 book "A Fragment on Government and an Introduction to the Principles of Morals and Legislation" (Basil Blackwell, Oxford) and to Dan-Cohen M (1984).

760 Dan-Cohen M (1984) p 627 discusses the positions of Jeremy Bentham, Hans Kelsen, Alf Ross and H.L.A. Hart.

761 See, for example, La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1998); La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (2000); Djankov S, La Porta R, Lopez-de-Silanes F, Shleifer A (2008).

*Conduct norm*s. Conduct norms consist of prohibitions of actions or omissions. Prohibitions can be clear or open. Conduct norms are clear when the outcome of their application can be predicted with reasonable clarity in advance. In contrast, the exact content of open conduct norms can be determined with reasonable clarity only after the fact.

Prohibitions of omissions are positive duties to take action. Positive duties can include clear requirements, open standards, and dynamic duties.

An example of an open standard in company law was the duty to observe the diligence of “a proper businessman” under the ADHGB 1884. This standard applied both to members of the management board[762] and to members of the supervisory board.[763] It is still part of German law. The present Aktiengesetz lays down a duty for management board members to observe the diligence of “a proper and conscientious manager” (“die Sorgfalt eines ordentlichen und gewissenhaften Geschäftsleiters”).[764] Supervisory board members are subject to the same duty.[765]

Dynamic duties are open standards that lay down the direction of action. The most basic dynamic duty is the duty to act in the interests of the company. In practice, this duty can be interpreted in different ways depending on the prevailing political and societal preferences (see sections 2.4.12 and 2.4.13).

The prohibition of fraud may be an example of a clear prohibition or a red line rule. Prohibitions can be made clearer with limits expressed numerically. To illustrate an open prohibition, a member of a management body customarily is prohibited from representing the company in its dealings with company insiders or outsiders to the extent that there are conflicts between the interests of the company and the member’s private interests. Whether there are conflicts of interest can be ascertained ex post but may be difficult to ascertain ex ante.

In common law countries, the notion of fiduciary duties seems to include a mix of open prohibitions, open standards, and dynamic duties. Since fiduciary duties are almost exclusively about process, they can largely be regarded as open standards.[766]

762 Article 241(2) of the ADHGB 1884.

763 Article 226(1) of the ADHGB 1884.

764 § 93(1) AktG.

765 § 116(1) AktG.

766 Webber D (2018) p 100: “Ultimately, fiduciary duties are almost exclusively about process, rather than outcomes. Investment decisions can succeed wildly or can turn disastrously wrong. It is not a breach of fiduciary duty to make a bad investment. It is a breach to make an investment choice, or oen affecting the value of investment, without any reasonable assessment of its risks, rewards, costs, and benefits. This should extend beyond returns alone …”

According to Justice Jacobs, there existed only two "bedrock fiduciary duties" in US corporate law until the late 1970s, namely the duties of care and loyalty. The duty of care "requires directors, in making a decision on behalf of and binding upon the corporation, (1) to act on an informed basis based on material information available to them, and (2) having become so informed, to act with appropriate care in arriving at their decision". The duty of loyalty "requires directors to avoid positioning themselves so that their self-interest conflicts with the best interests of the corporation and its shareholders, and should any such conflict arise, to place the interests of the corporation and its shareholders ahead of any conflicting personal interest." Justice Jacobs points out that the fiduciary duties of directors have "evolved in essentially four different areas: (1) director liability for breach of the duty of care, (2) the so-called independent duty of good faith, (3) the duty of oversight, and (4) the duty of disclosure".[767]

Some of these four areas are more important than others in US corporate law according to Justice Jacobs. Before 1985, "no public company board of directors had been held liable for money damages solely for breaching their duty of care", and until 1985, "liability was imposed only for duty of loyalty violations".[768] There seems to have been doctrinal confusion in the US.[769]

Sanctions. One can distinguish between conduct norms and sanctions, or between "standards of conduct" and "standards of review": "A standard of conduct states how an actor should conduct a given activity or play a given role. A standard of review states the test a court should apply when it reviews an actor's conduct to determine whether to impose liability or grant injunctive relief."[770] Standards of review are thus connected to the enforcement of sanctions in the event of breach of conduct norms.

Both conduct norms and standards of review are based on policy objectives that vary depending on the context.[771] There is a fundamental difference between company law and securities law as far as the enforcement of sanctions is concerned.

767 Jacobs JB (2015) p 145.

768 *Ibid.*, p 146.

769 See *ibid.*, p 147 (on good faith and Cede & Co. v. Technicolor, Inc.), p 149 (on good faith and Stone v. Ritter), p 149 (on the so-called director duty of oversight), and p 151 (on a fiduciary duty of disclosure and Lynch v. Vickers Energy Corp.).

770 Eisenberg MA (1993) p 437.

771 Heck P (1914). See also La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (2000) p 7: "In different jurisdictions, rules protecting investors come from different sources, including company, security, bankruptcy, takeover, and competition laws, but also from stock exchange regulations and accounting standards. Enforcement of laws is as crucial as their contents."

Securities law relies on sanctions as a deterrence.[772] Sanctions work as a deterrence especially when they are applied to individuals. In the US, Judge Rakoff famously stated that "[w]here management deceives its own shareholders, a fine most directly serves its deterrent purposes if it is assessed against the persons responsible for the deception."[773] In the EU, it is stated in the Market Abuse Regulation that "[a] sound prudential and conduct of business framework for the financial sector should rest on strong supervisory, investigation and sanction regimes."[774]

In company law, however, standards of conduct and standards of review often diverge due to policy interests: "First, directors must make decisions in an environment of imperfect information. Second, given the limited investment in publicly held firms that typical corporate directors are able or willing to make, any risk of liability would likely dwarf the incentives for assuming the role. Third, courts are ill-equipped to determine after-the-fact whether a particular business decision was reasonable in the circumstances confronting the corporation."[775] Justice Jacobs described the primary policy reason for restricting sanctions as follows: "In ordinary tort law, there is no distinction between the standard of conduct and the standard of review. In corporate law, however, there is a distinction, for policy reasons. The primary policy reason is that the fear of personal liability should not deter corporate directors from taking reasonable risks in the pursuit of corporate wealth since inevitably, given the law of averages, some decisions, even though perfectly reasonable at the time they were made, will turn out badly through no fault of the board."[776]

In company law, conduct norms are thus diluted and not complemented by effective sanctions. This is for a reason. Business failures are part of life. The firm cannot prosper, if its management is too risk-averse because of too high personal exposure to liability. The management function should therefore be protected

772 See Tountopoulos VD (2019).

773 SEC v Bank of Am. Corp., Nos. 09 Civ. 6829(JSR), 10 Civ. 0215(JSR), 2010 WL 624581, at *5 (S.D.N.Y. Feb. 22, 2010) (Rakoff, J.).

774 Recital 70 of Regulation (EU) No 596/2014 (MAR).

775 Allen WT, Jacobs JB, Strine LE Jr (2001) pp 867–868. See also Roe M, Spamann H, Fried J, Wang C (2021) p 152: "[A] central tenet of corporate law policy … is that judicial enforcement of the business content of fiduciary duties—absent fraud or similar intentional harm—is generally not desirable because judges could not possibly acquire the information to perform this function well."

776 Jacobs JB (2015) p 154.

against shareholders, other investors, and other stakeholders by reducing their rights to bring enforcement proceedings.[777]

It is particularly important to address the question of the enforcement of open conduct norms. Open conduct norms play an important role for the culture of the firm. They should therefore be enforced. However, since the exact contents of open conduct norms only can be ascertained after the fact, the unlimited enforcement of such norms through courts by shareholders or other stakeholders would make management too risk averse. The enforcement of open conduct norms should therefore be diluted as well.

Company law contains many well-known examples of how management is protected against the enforcement of sanctions.

First, duties are owed to a party meaning that only that party may enforce sanctions in the event that the duties are breached. Company law duties are owed to the company. Where company law duties are owed to the company, they are enforced by the company. Moreover, company laws lay down regulatory and administrative obligations in relation to the state. Such duties are enforced by the state. Where duties are owed directly to shareholders, shareholders can bring proceedings "directly", but shareholders do not have such a private right where duties are owed to the company or the state.[778]

Second, the separation of functions is used to shield managers. Company law duties and liability risks under company law are allocated to corporate bodies under the organ theory (continental Europe) or agency (common law countries). Most executives do not have duties under company law. They are shielded by the company law duties of the board.

Third, the rights of minority shareholders to bring proceedings are limited. The rights of minority shareholders to bring proceedings were limited already in the German company law reform of 1884 in order to prevent "total anarchy" and "all forms of blackmail". The German legislators believed that shareholders enjoyed larger rights to sue under French, Belgian and English law.[779] However,

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777 Douglas WO, Bates GE (1933) pp 172–173: "[R]isks should not be placed so high as to deter substantial and honest men from engaging in legitimate business." Mäntysaari P (2012) pp 108–109 and 136–137. For an opposite view, see, for example, La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1998) pp 1115–1116: "[W]e have assembled a data set covering legal rules pertaining to the rights of investors, and to the quality of enforcement of these rules, in 49 countries that have publicly traded companies ... In effect, these rules measure the ease with which investors can exercise their powers against management."

778 See Armour J, Black B, Cheffins BR, Nolan RC (2009).

779 See von Hein J (2008) p 96.

even English law was restrictive. *Foss v Harbottle*[780] had in effect made litigation about internal conflicts almost impossible under a corporate cause of action as the oppressed minority had to turn to company bodies before turning to court and the company bodies could ratify and rectify alleged misconduct.[781]

Fourth, there are restrictions on shareholders' derivative actions.[782] Since board members owe duties to the company as members of collegiate organs,[783] the question is whether shareholders may bring proceedings against them "indirectly" on behalf of the company. In order not to "open the floodgates" for a large number of expensive and/or unmeritorious derivative actions, the threshold of bringing a derivative action tends to be high.[784]

Fifth, there are safe harbours for management and board member actions such as the business judgment rule.[785] In practice, board members are rarely made liable to the company. The business judgment rule plays a particularly big role in protecting board members. The business judgment rule has its roots in US corporate law but exists in many other countries as well.

In Delaware, the business judgment rule "creates a presumption that (i) a decision was made by directors who (ii) were disinterested and independent, (iii) acted in subjective good faith, and (iv) employed a reasonable decision making process". In effect, decisions are reviewed "not for reasonableness but for rationality".[786]

There is Delaware case-law on the limits of the business judgment rule. For a long time, Delaware courts used to avoid imposing liability so long as board members acted in subjective good faith. When they started to apply the duty of care to directors' actions at the end of the twentieth century, their policy concern was that an overly aggressive approach to enforcing the duty of care could

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780 Foss v Harbottle (1843) 2 Hare 461, 67 ER 189.

781 Harris R (2013) p 370 – 371; Davies P (2020) p 275. See even Davies P (2020) p 273: "I am not aware of any case in which it was argued that in a company in where management powers had been delegated generally to the directors, the rule did not apply and so the individual shareholder had standing to sue."

782 See, for example, Fanto JA (1998a) pp 80 – 81 on the French derivative lawsuit.

783 Hopt KJ (2019b) p 539: "Tatsächlich galt die Organhaftung von Vorstand und Aufsichtsrat gegenüber der Gesellschaft bis zur Einführung des Aktiengesetzes 1937 durchaus als relevant. Demgegenüber wurde in den Neunziger Jahren des letzten Jahrhunderts die Bedeutung dieser Haftung als gering eingeschätzt." *Ibid.*, p 538: "Die Bedeutungswandel des Aufsichtsrats hat seinen Preis in einem ganz erheblichen Zuwachs von Pflichten und Haftungsrisiken des Aufsichtsrats ..."

784 See Puchniak DW, Baum H, Ewing-Chow M (2012).

785 OECD (2004) pp 40 – 41; OECD (2015b) p 19.

786 Allen WT, Jacobs JB, Strine LE Jr (2001) p 870.

deter risk-taking and discourage service on corporate boards by qualified candidates.[787] In *Aronson v Lewis*, the Delaware Supreme Court announced that the standard of review of claims that directors breached their duty of care is "gross negligence". This was applied in *Smith v Van Gorkom*[788] when the Delaware Supreme Court held external directors liable for damages in approving a sale of the corporation at a fifty percent premium over the stock market price. *Smith v Van Gorkom* prompted the adoption of Delaware legislation that permitted charter amendments that exculpate directors from personal liability for breaches of the duty of care.[789]

The business judgment rule reflects a central tenet in company law in many countries.[790] In German company law, it is codified in the Aktiengesetz.[791] In France, the business judgment rule is said to be based on case law as French courts customarily do not want to second-guess the decisions of the board of directors or the management of a solvent company.

Sixth, there may be limitations of liability. For example, the certificate of incorporation of a Delaware company may contain "[a] provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director"[792] subject to the customary restrictions.[793]

Public or private enforcement of sanctions. The choice between public or private enforcement can influence the efficiency of sanctions. In company law, the main rule is the private enforcement of sanctions. Public enforcement plays a bigger role in securities law partly because of the high cost of litigation, the small financial incentives of an individual investor to bring proceedings, and the risk that floodgates are opened for extortionate litigation.

In the US, John C. Coffee, Jr. has argued for private enforcement through class actions: "For better or worse, they do go where the money is, and that is

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787 *Ibid.*, pp 871–872.

788 Smith v Van Gorkom, 488 A.2d 858 (Del. 1985). See, for example, Fischel DR (1985); Stout LA (2002a); Shu-Acquaye F (2004); Sharfman BS (2008).

789 § 102(b)(7) of Delaware General Corporation Law.

790 See, for example, Roe M, Spamann H, Fried J, Wang C (2021) p 152.

791 § 93(1) AktG.

792 Section 102(b)(7) of the Delaware General Corporation Law.

793 *Ibid.:* "… such provision shall not eliminate or limit the liability of a director: (i) For any breach of the director's duty of loyalty to the corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) under § 174 of this title; or (iv) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision becomes effective …"

what is needed if we are going to get compensation for victims."[794] La Porta and co-authors found "little evidence that public enforcement benefits stock markets, but strong evidence that laws mandating disclosure and facilitating private enforcement through liability rules benefit stock markets" after studying the securities laws of 49 countries and their connection to the external-market-capitalisation-to-GDP ratio.[795]

However, rather than causation, the findings of La Porta and co-authors may reflect the simultaneoues existence of several parallel phenomena in the US. On one hand: There is a system based on public disclosures in the US. SEC Rule 10b-5 provides a private right of action against companies and directors for material misstatements that affect secondary trading of securities. Derivative actions are commonplace in the US.[796] Moreover, there is a culture of private litigation in the US. It is fuelled by parties paying their own legal expenses regardless of the result, by the use of contingency fees, and by class actions. There is also a difference between nominal liability and liability in fact. Due to various liability shields directors can rely upon, directors' nominal liability rarely translates into out-of-pocket payments in the US.[797] On the other: There is a high external-market-capitalisation-GDP ratio in the US. The one does not necessarily lead to the other. Market valuation may reflect the size of the market, liquidity, market integration, and capital inflows. The US has large integrated markets. The US dollar is the most widely-used currency in international trade and the most important reserve currency.

Private enforcement of sanctions might, therefore, be overrated. In fact, the private enforcement of company law rarely leads to the personal liability of board members.[798] Singapore and Hong Kong are examples of jurisdictions in which public enforcement has led to more actions.[799]

Market for corporate control. The market for corporate control is a further mechanism to sanction board members and managers. It was coined by Manne.

According to Manne, there is "no objective standard of managerial efficiency" apart from the stock market, and the business-judgment rule means that courts are "loath to second-guess business decisions or remove directors from

794 Coffee J Jr (2009).

795 La Porta R, Lopez-de-Silanes F, Shleifer A (2006), Abstract.

796 The US Supreme Court suggested in Cohen v Beneficial Industrial Loan Corp., 337 US 541, 548 (1949) that the derivative suit was "long the chief regulator of corporate management".

797 See Armour J, Black B, Cheffins BR, Nolan RC (2009); Coffee JC Jr (2015).

798 Armour J, Black B, Cheffins BR, Nolan RC (2009).

799 Wan WY, Chen C, Goo SH (2019).

office".[800] There is nevertheless a market for corporate control: "A fundamental premise underlying the market for corporate control is the existence of a high positive correlation between corporate managerial efficiency and the market price of shares of that company. As an existing company is poorly managed – in the sense of not making as great a return for the shareholders as could be accomplished under other feasible managements – the market price of the shares declines relative to the shares of other companies in the same industry or relative to the market as a whole."[801] This can make existing shareholders exit the company and attract investors who believe they can turn the company around by putting in place better management. According to Manne, "[o]nly the takeover scheme provides some assurance of competitive efliciency among corporate managers and thereby affords strong protection to the interests of vast numbers of small, non-controlling shareholders".[802]

The market for corporate control thus means that bad management choices for whatever reason make the company worse, reduce share price, can make the company a takeover target, and can lead to a takeover after which new management will be put in place. There may have been overreliance on the market for corporate control as a governance tool in the US.[803]

Incentives. We have discussed various ways to address potential conflicts of interest through structural measures, conduct norms, and sanctions.

In the nineteenth and early twentieth centuries, continental European company law focused on the allocation of functions, duties, and sanctions as ways to mitigate conflicts of interest. According to this way of thinking, corporate bodies were expected to comply with their legal duties. The threat of sanctions provided social and financial incentives for members of corporate bodies to observe certain conduct.

Financial incentives can be designed in different ways. For example, under the French law of 1867, the administrators deposited their shares as collateral for the fulfilment of their duties.[804] It is more customary to use board and manager

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800 Manne HG (1965) p 113.

801 *Ibid.*, p 112.

802 *Ibid.*, p 113.

803 See Macey JR, Miller PP (1995–1996) p 76: "[F]irm performance can be more effectively enhanced by eliminating restrictions on the market for corporate control, thereby improving the voice of American equity holders." *Ibid.*, pp 81–82: "In the United States, the market for corporate control reduces managerial inefficiency and restrains managerial self-interest. A robust corporate control market spurs hostile takeovers; new owners replace inefficient management teams. Strong evidence indicates that hostile takeovers discipline managers and improve corporate performance."

804 Article 26 of the law of 1867.

remuneration to create positive financial rewards. Different mechanisms can be used to ensure that financial rewards are reasonable. For example, German law has used a clear separation of duties between corporate bodies and bright line rules as ways to mitigate conflicts of interest and keep board and manager remuneration reasonable. The German Aktiengesetz provides that the remuneration of board members must not exceed what is reasonable. Moreover, the Aktiengesetz prohibits the use of share-based incentives for the remuneration of supervisory board members, because members of a monitoring body should not be remunerated for management.

These earlier practices seem to have been rational even in the light of modern economic theory. In 1991, Simon argued that managers are motivated by many kinds of rewards, many of which are non-financial.[805] Holmström and Milgrom pointed out that "in multitask principal-agent problems, job design is an important instrument for the control of incentives".[806] Managers and board members tend to have multidimensional tasks. At least part of the modern view on incentives therefore seems to have been understood in continental European company law.

Since the 1970s, however, positive financial rewards have taken a prominent role in the alignment of interests under the financial business model. The use of positive financial rewards can briefly be illustrated with remuneration practices under the financial business model and duties under the Shareholder Rights Directive adopted by the EU in 2017 (SRD II).[807]

Positive financial rewards. Positive financial rewards became the main way to align the interests of board members and the CEO with the interests of shareholders in the US after 1976. The increased use of positive financial rewards went hand in hand with the financial business model and the reception of neoclassical economic theory.[808] The use of positive financial rewards such as share-based remuneration schemes spread from the US to other countries.

This practice increased CEO pay (Chapter 1).[809] Overreliance on positive financial rewards is likely to have contributed to overpayment, because the standard model of corporate governance with shareholders as principals and board

805 Simon HA (1991) p 30.
806 Holmström B, Milgrom P (1991) pp 25–26.
807 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.
808 Jensen MC, Meckling WH (1976). See Bratton WW (1989) pp 1476–1477.
809 Mishel L, Davis A (2015).

members and managers as their agents[810] focuses on financial incentives only. It does not take into account the existence of non-pecuniary incentives. Moreover, the standard model of neo-classical economic theory does not distinguish between multidimensional and one-dimensional tasks, and does not take into account the role played by the allocation of functions, duties and sanctions: "the grouping of tasks into jobs is not a relevant issue".[811]

Board members may have had an incentive to use positive financial rewards and ready-made remuneration schemes in the remuneration of the CEO and managers in order to create seemingly win-win situations, signal their own efficiency as monitors, reduce their own risk exposure, and sometimes enrich themselves. At the same time, overreliance on positive financial rewards has created fundamental conflicts of interest between the firm and its board and/or CEO as the board's and the CEO's position of control enables them to extract rents[812] or become "tax gatherers".[813]

Excursion: Remuneration under SRD II. In the EU, remuneration issues were addressed by the Shareholder Rights Directive of 2017 (SRD II).[814] The Directive addresses questions of remuneration policy, remuneration reports, and shareholder say on pay.

According to SRD II, a company must have a remuneration policy for "directors" if its shares are traded on a regulated market in a Member State.[815] SRD II provides a framework for the contents of the remuneration policy: "The remuneration policy shall contribute to the company's business strategy and long-term interests and sustainability and shall explain how it does so. It shall be clear and understandable and describe the different components of fixed and variable

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810 Alchian AA, Demsetz H (1972); Jensen MC, Meckling WH (1976); Bratton WW (1989) pp 1476–1477: "We can precisely date the advent of the neoclassical variant with the publication of a paper by Alchian and Demsetz in 1972. The watershed year was 1976, when Jensen and Meckling's well-known analysis of the firm appeared. These papers draw on neoclassical conceptions of contract to devise a radical rejection of the managerialist approach."

811 Holmström B, Milgrom P (1991) pp 25–26.

812 Bebchuk LA, Fried JM, Walker DI (2002).

813 Brandeis LD (1914) p 110: "The banker has become the universal tax gatherer."

814 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.

815 See recital 1 of Directive 2017/828/EU (SRD II): "Directive 2007/36/EC … establishes requirements in relation to the exercise of certain shareholder rights attached to voting shares in relation to general meetings of companies which have their registered office in a Member State and the shares of which are admitted to trading on a regulated market situated or operating within a Member State."

remuneration, including all bonuses and other benefits in whatever form, which can be awarded to directors and indicate their relative proportion."[816] SRD II thus addresses fixed remuneration, variable remuneration and share-based remuneration, if the company awards such remuneration.[817] Moreover, "[t]he remuneration policy shall explain how the pay and employment conditions of employees of the company were taken into account when establishing the remuneration policy."[818]

Shareholders will be able to express their views twice under SRD II. They vote on the remuneration policy ex ante. Depending on the Member State, the vote is binding[819] or advisory.[820] Shareholders have an advisory vote on a remuneration report ex post.[821]

It is recognised in the SRD II that shareholders have been bad monitors in the past (see also section 2.4.5) and that equity market investors have supported excessive short-term risk-taking.[822] The variety of legal corporate governance models in the EU is reflected in the very broad definition of "directors". The definition includes various kinds of board members and executives.[823]

The Directive nevertheless reflects the standard financial model of corporate governance[824] and is based on the regulatory tradition of common law countries. SRD II relies on transparency (section 2.4.7),[825] monitoring by shareholders,[826] financial incentives, and the alignment of interests by financial incentives.[827]

816 The first subparagraph of the new Article 9a(6) introduced by Directive 2017/828/EU (SRD II).

817 The third and fourth subparagraphs of the new Article 9a(6) introduced by Directive 2017/828/EU (SRD II).

818 The second subparagraph of the new Article 9a(6) introduced by Directive 2017/828/EU (SRD II). This provision seems to be aligned with Article 9(5) of Directive 2004/25/EC (Directive on takeover bids).

819 The new Article 9a(2) introduced by Directive 2017/828/EU (SRD II).

820 The new Article 9a(3) introduced by Directive 2017/828/EU (SRD II).

821 The new Article 9b(4) introduced by Directive 2017/828/EU (SRD II).

822 Recitals 2 and 15 of Directive 2017/828/EU (SRD II).

823 Article 1 of Directive 2017/828/EU (SRD II): "Directive 2007/36/EC is amended as follows: ... (2) Article 2 is amended as follows ... (i) "director" means: (i) any member of the administrative, management or supervisory bodies of a company; (ii) where they are not members of the administrative, management or supervisory bodies of a company, the chief executive officer and, if such function exists in a company, the deputy chief executive officer; (iii) where so determined by a Member State, other persons who perform functions similar to those performed under point (i) or (ii); ..."

824 Jensen MC, Meckling WH (1976).

825 Recital 34 of Directive 2017/828/EU (SRD II).

826 Recitals 9, 15, 29 and 31 of Directive 2017/828/EU (SRD II).

Apart from the reception of the standard financial model of corporate governance, the state of harmonisation of company law and corporate governance may have played a role. The Directive might focus on the role of shareholders, because neither board structures nor corporate governance in general have been harmonised in EU company law and seem to have been out of the Commision's reach.[828]

This said, SRD II leaves unclear why equity market investors would have the incentives and competence to vote on a remuneration policy that is not in their short-term interests. This is partly taken into account in the allocation of power. While shareholders according to SRD II should "have the possibility to express their views regarding the remuneration policy of the company", it is also "important that the remuneration policy of companies is determined in an appropriate manner by competent bodies within the company" because of "the crucial role of directors in companies".[829] What this means is that the remuneration policy will be drafted by members of "the competent bodies" for themselves and for other "directors". It is customary to employ a consultancy firm to draft a remuneration policy for the purpose of adding a layer of credibility and hiding the goal of self-enrichment under a shroud of market practice. The main mechanism for controlling remuneration under SRD II is laying down the contents of a "remuneration policy" and increasing transparency. It is far from laying down constraints on remuneration as such.

The Directive looks like a compromise unable to solve the problems it is designed to address. Its theoretical background is vague.[830] It is an example of how the EU sometimes should do less in the area of company law.[831]

Conclusion. Much of company law addresses the risk of self-interested decision-making. It is one of the reasons why company law provides for the separation of functions, board structures, and transparency. When dealing with this risk, is customary to apply various kinds of conduct norms and sanctions.

The breach of conduct norms will not always trigger the liability of members of corporate bodies. There is a difference between standards of conduct and

827 Recitals 28 and 29 of Directive 2017/828/EU (SRD II).
828 Recital 28 of Directive 2017/828/EU (SRD II).
829 Recital 28 of Directive 2017/828/EU (SRD II).
830 Less critically Hopt KJ (2019a) II.3(c): "Under the aspect of comparative company law, three remarks are worth making. First, the Directive reflects new dimensions of company law as discussed internationally, ie more emphasis is now on the shareholders, including institutional shareholders, as compared to the board. Whether the hopes placed on better corporate governance by shareholders are justified remains to be seen."
831 See Ghetti R (2018) p 842 on the regulation of European company forms.

standards of review due to policy interests. Standards of review must be lower in order not to encourage too risk-averse behaviour. For this reason, management is protected against shareholders and other investors.

Protecting management against shareholders and other investors is the opposite of what La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) regard as good regulatory practice. In their 1998 study, LLSV measured "the ease with which investors can exercise their powers against management".[832] They found that countries whose legal systems are based on civil codes have systematically "weaker" environments for business than those whose legal systems are based on Anglo-American common law.[833] One may ask whether the preferences of LLSV have influenced their conclusions.

The financial business model and the reception of its standard model of corporate governance have led to increased use of positive financial rewards as a way to address the risk of self-interested decision-making. In the US, overreliance on financial incentives in general and positive financial rewards in particular increased CEO remuneration. In the EU, the Shareholder Rights Directive of 2017 (SRD II) is a move in the same direction.

2.4.12 Economic Forces

Company law needs a narrative.[834] The narrative of company law tends to include aligning it with economic forces. What are economic forces and what economic forces have been relevant in the past?

For a modern business venture you need an organisation based on specialisation and the separation of functions between different corporate bodies (section 2.4.5).[835] The way resources are combined in an organisation goes hand in hand with technological and commercial advancement. Technological and commercial advancement has influenced the evolution of company law (sections 2.4.2 and 5.3). In addition, the evolution of company law is influenced by commercial and political power (section 2.4.13). Some of the alternative commercial and political preferences may have become the new narrative, prevailed as the

832 La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1998) pp 1115–1116. See also La Porta R, Lopez-de-Silanes F, Shleifer A (2008).

833 Critically, for example, Lamoreaux NR, Rosenthal JL (2005) p 29; Siems MM (2007).

834 There is a narrative even in economics. See Shiller RJ (2019).

835 Chandler AD (1977) pp 6–11.

new corporate and societal corporate culture,[836] recepted as norms, and adopted as new rules of the game.

The mix of such heterogeneous factors can here be called "economic forces".[837] Some economic forces have provided the narrative for company law and acted as drivers of company law change. We can have a brief look at them in a rough chronological order.

Early trading companies. The earliest European companies were partnerships. In a partnership, there was no clear separation of ownership and work, or ownership and management. Partners both provided capital and participated in work and management.[838]

As the size and complexity of trading ventures grew in the sixteenth and seventeenth centuries, it became necessary to raise larger amounts of capital. At the same time, the advancement of technology and business contributed to the accumulation of wealth and facilitated the diversification of investments. Limited partnerships and chartered companies were used as tools in continental Europe when organising larger and larger ventures. It was characteristic of them that some capital investors participated in management and some did not. The VOC is an example of the separation of functions between the merchants in charge (bewindhebbers) and other shareholders (participanten).

Increasing complexity since the second half of the nineteenth century. In the nineteenth century, competition between firms and between countries was increased by industrialisation. Countries had to increase their economic perfor-

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836 See, for example, Jacobs JB (2015) p 141: "I suggest that the evolution in corporate law is better described as a series of practical resolutions of institutional conflicts that, over time, were influenced and developed by converging economic forces and events." Bratton WW (1989) pp 1472–1473: "… a long series of attempts to describe and justify the phenomenon of collective production in individualist terms. Such theories have followed from and responded to economic practice …" Jacobs JB (2015) pp 141–142: "… institutional investors now constitute the stockholder base of U.S. public corporations. That development … has led to an increase in shareholder power relative to that of boards of directors, and a challenge to the vitality of the board-centric model on which corporate law has traditionally rested."

837 For example, the classification of company forms on the basis of capital and labour would not be sufficient in today's complex society. Goldschmidt L (1891) pp 254–255: "Die verschiedenen Hauptformen der gesellschaftlichen Unternehmung haben verschiedene Wurzeln … Unergiebig für die geschichtliche Einsicht ist die Klassifikation der gesellschaftlichen Verbindungen nach der Art und dem wechselnden Maße der Produktivfaktoren Kapital und Arbeit, welche bei der Verbindung zusammenzuwirken pflegen."

838 Chandler AD (1977) p 36; Goldschmidt L (1891) p 254: "Die heutige offene Gesellschaft, jünger als die commenda, von vornherein Gewerbsgesellschaft, wurzelt überwiegend in der Hauswirtschaft der Familienglieder, hat aber keineswegs nur aus dieser ihre leitende Rechtsprinzipien entnommen."

mance as they competed for political and military hegemony. This led to free incorporation in the mid-nineteenth century.

In the second half of the nineteenth century, a high level of management discretion and access to capital were important for the survival of larger and larger firms in an environment of growing market globalisation and rapid technological change.

Already in the mid-nineteenth century, the number of corporations in the US was many times higher than in France.[839] Most US industrial corporations were small family firms[840] that, until the 1870s, focused on manufacturing only.[841] This changed when the basic railroad network was completed in the 1880s. It became easier for industrial enterprises to exploit new opportunities for horizontal and vertical growth.[842] There was plenty of room for American firms to grow in the late nineteenth century due to the large geographical size of the US and its fast-growing population.[843] Firms with good managers benefited from the growth of American markets. At the same time, the growth of American economy generated surplus wealth seeking investment opportunities.

From the 1890s on, the US was the world's leading industrial nation. Many of the American firms of the time expanded abroad and played a major role in global competition.[844] German economy grew as well. Despite the so-called founders' crisis (Gründerkrise) that followed the founders' period (Gründerzeit) and the stock market crash of 1873, Germany was by 1900 one of the three leading industrialised countries in the world and had the largest economy in Europe.

The increased complexity of the modern industrial enterprise increased the need for specialised management. This contributed to the rise of management as a profession and the separation of share ownership and management. Moreover, the specialisation of management and the increased diversification of investments contributed to the separation of monitoring and management.

Because of the increasing complexity of business and firms, firms needed professional managers and a high level of management discretion. Various practices were used to shield professional management from shareholders.

First, there were practices relating to organisation. Towards the end of the nineteenth century, German company law facilitated the separation of share own-

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839 Lamoreaux NR, Rosenthal JL (2005) p 32.
840 Chandler AD (1962) p 19.
841 *Ibid.*, p 24.
842 *Ibid.*, p 29; Chandler AD (1990) p 53.
843 Chandler AD (1990) p 52.
844 *Ibid.*, p 47.

ership, monitoring, and management by adopting a two-tier board model.[845] In US corporate practice, it was customary to vest corporate powers in the board that delegated its powers to professional managers.[846] The powers of the board were cemented by the irrevocable nature of the corporate charter (*Dartmouth College*).[847] Professional auditing emerged as a form of specialised monitoring.

Second, management discretion was complemented by norms laying down dynamic duties that set out how the discretion was to be exercised. In the US, board members had a duty to act in the interests of the company. In Germany, the duty of board members to act in the interests of the company turned into a duty to act in the interests of the firm (Unternehmensinteresse) in the 1920s (section 2.4.13).

Third, the risk exposure of board members was reduced by defining minimum standards for the work process of board members and applying different thresholds for standards of conduct and standards of review. In the US, risk exposure was reduced and management discretion increased by the business judgment rule and a limited duty of care.[848] In Germany, the duty to observe the standard of a good businessman[849] or manager[850] was later complemented by Germany's own version of the business judgment rule.[851]

Managerial capitalism in the twentieth century. The first wave of market globalisation came to an end with the beginning of the First World War. The second wave of market globalisation started after the Second World War.[852]

According to Chandler, modern American industrial enterprises expanded in global markets even between these two periods: "After World War I the modern

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845 Articles 209f, 225 and 225a of the ADHGB 1884.

846 Chandler AD (1990) p 48: "In 1917 the major stockholders in most large U.S. industrial enterprises were still represented on the board of directors, but these boards had become primarily ratifying bodies. The outside directors had the power to veto proposals made by the managers. The inside directors, however, set the agendas. They remained the primary – indeed nearly always the only – source of the information with which decisions were made and action taken. They also implemented the decisions made by the boards."

847 Dartmouth College v. Woodward, 17 U.S. (4 Wheat.) 518 (1819).

848 See Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984): "Under the business judgment rule director liability is predicated upon concepts of gross negligence." For a critical view on the business judgment rule, see Gevurtz FA (1994).

849 Article 241(2) of the ADHGB 1884: "… die Sorgfalt eines ordentlichen Geschäftsmanns …"

850 § 93(1) AktG: "… die Sorgfalt eines ordentlichen und gewissenhaften Geschäftsleiters …"

851 § 93(1) AktG: "… Eine Pflichtverletzung liegt nicht vor, wenn das Vorstandsmitglied bei einer unternehmerischen Entscheidung vernünftigerweise annehmen durfte, auf der Grundlage angemessener Information zum Wohle der Gesellschaft zu handeln …"

852 See also Jacobs JB (2011) pp 1645 – 1646: "This period, from 1945 to 1975, was the 'golden era' of American economic prosperity."

industrial enterprise in the United States continued to compete and grow ... During the 1920s and 1930s they grew more by moving into new geographical markets and diversifying into related products than by horizontal combination and vertical integration (as had been the case before the war). After 1920 investment in research and development increased. More companies expanded overseas. Diversification became an accepted strategy of growth."[853]

Keynes observed how big firms tended to "socialise" themselves in this period. He described "the trend of joint stock institutions, when they have reached a certain age and size, to approximate to the status of public corporations rather than that of individualistic private enterprise". He said that "[a] point arrives in the growth of a big institution ... at which the owners of the capital, i. e. its shareholders, are almost entirely dissociated from the management, with the result that the direct personal interest of the latter in the making of great profit becomes quite secondary." According to Keynes, this should change the role of management and the remuneration of shareholders: "When this stage is reached, the general stability and reputation of the institution are the more considered by the management than the maximum of profit for the shareholders. The shareholders must be satisfied by conventionally adequate dividends; but once this is secured, the direct interest of the management often consists in avoiding criticism from the public and from the customers of the concern."[854]

Similar observations were made by Rathenau in Germany and Berle and Means in the US (section 2.4.13).[855]

By the Second World War, "managerial capitalism had become firmly established in the United States" but "was less evident elsewhere" according to Chandler who continued: "In Germany families, large investors, and banks continued to play a more influential role ... In Britain ... personal and family control and management were still more the rule than the exception."[856]

The German focus on the firm and organisational capabilities may have helped Germany to emerge as the centre for rapid technological development in the interwar period. The postwar West German economy performed exceedingly well between 1950 and 1968 (Wirtschaftswunder).

During the US era of managerial capitalism, it was part of business culture to reinvest retained earnings in the business: "Until well after World War II, both the managers with little equity in the enterprise (the inside directors) and the representatives of the major stock-holders (the outside directors) agreed that re-

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853 Chandler AD (1990) p 48.
854 Keynes JM (1926) Chapter IV.
855 Rathenau W (1917a) pp 38–39; Berle AA, Means GC (1932).
856 Chandler AD (1990) p 49.

tained earnings should be reinvested in facilities and personnel in industries where the enterprise had developed competitive advantages based on its organizational capabilities … Wealthy investors continued to prefer to keep their capital in enterprises whose organizational capabilities they understood, and whose inside directors they might influence – rather than to invest through the capital markets in enterprises whose capabilities and managers they did not know."[857]

The period of economic growth after the Second World War has been called the "golden era" of patient capital in the US.[858] The golden era had its particular characteristics in the company law discourse. In the absence of a "market for corporate control", company law was "management friendly".[859]

Patient capital benefited American economy as a whole: "The good effects were that the same freedom from being forced to manage the firm for the short-term gave American enterprises breathing space to innovate new products, to bring those products to market, and to plan for the long-term without pressure from investors or stock analysts to produce a short-term return on their invested capital."[860]

The US may have accounted for 85% of all new foreign direct investment outflows between 1945 and the mid-1960s. The growing role of multinational firms and multinational consultancy and service firms contributed to the adoption of US management practices in many other countries.[861]

The rise of institutional investors, the financial business model. US managerial capitalism was brought to an end by the rise of institutional investment and changes in the share ownership structure of large companies. Corporate strategy and the funding structure of large companies changed as well.[862]

In 2007, SEC General Counsel Brian G. Cartwright summed up the long-term trend of "deretailization" of US stock markets since the 1950s. The three forms of deretailisation include "the shrinking percentage of direct retail investors in the stock market", "the development of institutions-only trading markets that exclude retail investors entirely", and "the development of new and dynamic asset classes that also exclude retail investors entirely".[863]

857 *Ibid.*, p 595.
858 Jacobs JB (2011) p 1646.
859 *Ibid.*, p 1647.
860 *Ibid.*, p 1649.
861 Jones G (2005) pp 88 and 91.
862 See, for example, The Economist, Buttonwood: Rich Pickens. How T. Boone Pickens changed corporate finance in America, 21 September 2019.
863 Cartwright BG (2007).

In 1950, most US stocks were directly owned by retail investors. Today, the stockholder base of US public corporations consists of institutional investors.[864] While the reported percentages of equity held by retail investors v institutional investors differ substantially,[865] the change is radical. Justice Jacobs described the changing share ownership structure of large US companies as follows: "In 1951, individual retail investors owned over 75% of all outstanding corporate equities in the United States. By 1979, institutional investors as a group owned over 36%. [In 2011], institutional investors, including public and private pension and retirement funds, mutual funds, and hedge funds, [controlled] nearly 70%."[866] In 2018, about 75% of the common stock of American public companies belonged to institutional intermediaries.[867] Retail investors' direct share ownership is even rarer in the UK where individual shareholders now own around 11% of UK equities.[868]

This trend was partly caused by legislation. In the US, state pensions are not expected to provide a full retirement income for large parts of the population. More emphasis is placed on occupational pensions. The rise of institutional shareholders was "legally embedded in generously sponsored, funded occupational and individual pension regimes".[869] Shortly after the introduction of the Employee Retirement Income Security Act (ERISA) in the 1970s, Peter Drucker popularized the phrase "pension-fund socialism".[870] US pension assets are by far the greatest asset in US capital markets.[871]

This said, the mutual fund industry was still struggling in 1980. The SEC therefore adopted Rule 12b–1 of the Investment Company Act of 1940 (ICA). In

864 Jacobs JB (2015) pp 141–142.
865 See Roth M (2013) p 776; Cartwright BG (2007): "Estimates vary, but widely cited sources put retail stock ownership in 1950 at more than 90%, while I've seen some estimates that put current retail ownership as low as a little over 30%." Holmström B, Kaplan SN (2003) p 14: "[F]rom 1980 to 1996, large institutional investors nearly doubled their share of ownership of U.S. corporations from less than 30% to more than 50%."
866 Jacobs JB (2011) p 1650.
867 Fox MB, Glosten LR, Greene EF, Patel MS (2018) p 24.
868 The Kay Review (2012) paragraph 3.5.
869 Roth M (2013) p 776.
870 Drucker PF (1976). See also Boerner H (2004); Roth M (2013) p 754. For the central points of Drucker's pension-fund socialism, see Ambachtsheer K (2007/2015).
871 Roth M (2013) p 771: "In the United States, more emphasis is placed on occupational pensions; social security is not as close to the insurance principle as it is in the German system. Unlike in Germany, US state pensions were never expected to provide a full retirement income for large parts of the population." Worker pension funds such as CalPERS have the means to wield plenty of power in American corporate governance due to the size of their portfolios. See Roth M (2013) pp 771–772; Webber D (2018).

1990, the SEC's Rule 144A removed most of the regulatory impediments to secondary market transactions between large institutions regarded as "qualified institutional buyers" (QIBs). Rule 144A created efficient QIB-only secondary markets that hade a negative effect on IPO volumes.[872]

These changes coincided with a major change in the US economy. The deretailisation of the American securities market, the growing role of institutional investors, and increasing financialisation in the post-1970 era made it "the era of increasingly impatient capital".[873]

There was a new self-fulfilling narrative that reflected the financialisation of economy. Regulatory change acted as a driver of the financialisation of economy, and the financial business model acted as a driver of regulatory change.[874]

Corporations moved from the managerial business model to the "financial business model in which companies are viewed as assets to be bought and sold for the sole purpose of maximizing profit".[875] Before 1980, managers tended to think of themselves as representing "the corporation" rather than shareholders. Since the 1980s, the opposite has been the case.[876] According to Holmström and Kaplan, managers ceded authority to markets and the scope and independence of their decision-making narrowed.[877] Since institutional investors customarily were not represented on corporate boards, manager discretion was mainly constrained by the new narrative and a focus on share price.[878]

According to Justice Jacobs, this development "led to an increase in shareholder power relative to that of boards of directors, and a challenge to the vitality of the board-centric model on which corporate law has traditionally rested".[879] In other words, "during that post-war period, American corporations were the dog

872 *Ibid.*

873 Jacobs JB (2011) p 1650.

874 See Cartwright BG (2007); Appelbaum E, Batt R (2012); Batt R, Appelbaum E (2013); Appelbaum E, Batt R (2014) pp 27–29; Lafer G (2017) p 18.

875 Appelbaum E, Batt R (2014) p 27; Lafer G (2017) pp 18–19.

876 Holmström B, Kaplan SN (2003) p 10.

877 *Ibid.*, p 12.

878 Jensen MC (1989): "Indeed, the high cost of being an active investor has left financial institutions and money management firms, which control more than 40% of all corporate equity in the United States, almost completely uninvolved in the major decisions and long-term strategies of the companies their clients own. They are almost never represented on corporate boards. They use the proxy mechanism rarely and usually ineffectively, notwithstanding recent efforts by the Council of Institutional Investors and other shareholder activists to gain a larger voice in corporate affairs. All told, institutional investors are remarkably powerless; they have few options to express dissatisfaction with management other than to sell their shares and vote with their feet."

879 Jacobs JB (2015) pp 141–142.

and the capital markets were the tail. That is, the focus and time horizon of both corporate managements and investors was on long-term, stable growth, with the growth of the company being primary and any increase in the value of stockholders' investments being secondary ... Today, unfortunately, the exact reverse of that ethos and mindset prevails in [the US]. The capital markets are now the dog, and the corporations that create the wealth that, in turn, generates investment capital are the tail."[880]

The change had a connection to the business model of traditional investment funds. The management company of an investment fund basically makes money from the fund.[881] The fund has diversified holdings. The management company of an investment fund does not need to be interested in the future long-term success of any portfolio company.[882] In a portfolio company, the interests of a fund management company and the average shareholder are short-term.[883]

The growth and concentration of the investment management industry made it possible for the biggest fund managers to control large stakes in American public companies.[884] In 2007, assets under the management of mutual funds exceeded $10 trillion.[885]

New theories and corporate law models became necessary to make the new narrative real, create a new corporate and societal culture, and make it legitimate to shift power from management and the board to institutional investors (meaning often fund management companies or proxy-advisory companies, none of which need to be shareholders). Much of the new theoretical framework was designed to foster the interests of institutional investors and hamper the managerial business model under which returns are generated through produc-

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880 Jacobs JB (2011) p 1646.

881 The most extreme example is zombie funds. Siobhan Riding, More than €1tn of investor money is stuck in 'zombie' funds. Financial Times, 10 February 2020.

882 See Morley J (2014); Ferrell A, Morley JD (2018). Sometimes the management company or its employees might invest some of their own money in the fund or the fund's portfolio companies. Morley J (2014) p 1239.

883 The average shareholder in the US stays four months according to Stout LA (2012) p 45.

884 Ferrell A, Morley JD (2018) pp 348 – 349: "Work by a number of authors has shown that the investment management industry has grown both much larger and much more concentrated in recent years, causing the biggest investment managers to control astoundingly large stakes in American public companies ... Some of this research suggests that the largest managers' stakes are so vast and so widespread that they might be tilting toward monopolization."

885 Cartwright BG (2007).

tive activities.[886] The new narrative influenced the evolution of corporate law (section 2.4.13).[887]

For example, the strict application of the company's foundational documents in the US was diluted by the Delaware Supreme Court's decision in *Schnell v. Chris Craft Industries, Inc.*[888] in which the court held that inequitable action by corporate fiduciaries does not become permissible simply because it is legally possible. According to Justice Jacobs, "Chris Craft spawned a new galaxy of corporate fiduciary doctrine. From that point onward, judicial review of corporate fiduciary conduct would not be limited to what the company's foundational documents prescribed, but that conduct would also be subject to the overriding application of judge-made equitable principles … As a consequence, the Delaware courts shed their previous institutional management-oriented bias and became more sensitive to legitimate claims and expectations of shareholders."[889]

From the perspective of the increasingly more powerful institutional investors, the ultimate goal of the financial business model was the creation of value for the shareholder. In fact, returns on share investments rose, because more of the value added was distributed to shareholders.[890] But productivity fell, as the proportion of cashflow paid to shareholders increased and cash used for investments fell.[891]

The financial business model and shareholder primacy became the prevailing narrative in many other countries as well.[892] The drivers of the reception of the financial business model and shareholder primacy outside the US and other common law countries ranged from academic incentives in economic sciences worldwide to the globalisation of business practices with Anglo-American

886 Appelbaum E, Batt R (2014) pp 27–29; Lafer G (2017) pp 18–19. Lafer G (2017) p 21: "[I]n order to understand or anticipate corporate political activity, it is more fruitful to examine business models and profit strategies than to plumb the personal worldview of senior managers."
887 Jacobs JB (2015) p 141: "I suggest that the evolution in corporate law is better described as a series of practical resolutions of institutional conflicts that, over time, were influenced and developed by converging economic forces and events."
888 285 A.2d 437 (Del. 1971).
889 Jacobs JB (2015) pp 144–145.
890 François P, Lemercier C, Reverdy T (2015).
891 According to Andrew Smithers, the proportion of operating cashflow paid out to shareholders by non-financial American companies was just 19.6 % between 1947 and 1999. By the end of that era, share options became a popular means of motivating managers. The proportion of cashflow paid to shareholders averaged 40.7 % between 2000 to 2017. Cash used for investment fell. The Economist, Bartleby. Talent management, 6 February 2021; Smithers A (2019).
892 See, for example, Hansmann H, Kraakman R (2001) proclaiming that "[t]he triumph of the shareholder-oriented model of the corporation over its principal competitors is now assured".

practices as the global platform. They found fertile ground in many countries because of the existence of similar financial investor and executive interests.[893]

The concentration and globalisation of business and digital economy. The next big thing was the concentration of business. There were many drivers of concentration.

First, the liberalisation of trade and capital movements and increasing digitalisation made economies of scale important not only in national markets but even in the global marketplace. This contributed to the emergence of globally dominant firms and the polarisation of business. There are now global firms ("frontier firms") competing against each other in many markets at the same high level, local firms competing against other local firms at a less advanced level, and an increasing gap between global firms and local firms.[894]

Second, the concentration of business and the short-term distribution of funds to shareholders were increased by M&A activity.[895] Firms were taken over in trade sales or by private equity funds. In target companies, takeovers were welcomed by short-term shareholders, because the valuation of a target company tends to increase when the company enters the takeover market and the time horizon changes from long to short.[896] Takeovers of listed companies were made easier by the deretailisation and institutionalisation of share ownership and the concentration of the investment management industry.[897] Moreover, M&A activity in general and private equity in particular acted as drivers of deretailisation.[898] M&A activity was made to look legitimate in target companies by the market-for-corporate-control theory, the shareholder primacy ideology, and the perceived efficiency benefits of private equity.[899]

893 See, for example, André T Jr (1998).
894 Andrews D, Criscuolo C, Gal PN (2016).
895 See, for example, Joe Rennison, Private equity owners pile on leverage to pay themselves dividends. Financial Times, 17 September 2020.
896 See, for example, Mäntysaari P (2010c).
897 Ferrell A, Morley JD (2018).
898 Cartwright BG (2007): "Private equity funds in fact triply compound deretailization, in that – one – not only can retail investors generally not invest in them, but – two – the very purpose of private equity funds is to buy out the retail investors in previously public companies, and – three – those buy-outs typically are financed in institutions-only 144 A and syndicated secured debt markets."
899 Jensen MC (1989). For the economic effects of private equity buyouts in the US, see Davis SJ, Haltiwanger J, Handley K, Lipsius B, Lerner J, Miranda J (2019). For shareholder primacy as ideology, see, for example, André T Jr (1998); Stout LA (2012) p 3: Macey JR (2013) pp 911–912.

Third, positive network effects work as a driver of concentration in digital economy. A winner-takes-all market has made tech firms such as Amazon concentrate primarily on volume and growth rather than short-term profits.[900] The new business model can be illustrated with the first letter to shareholders published by Amazon after it went public.[901] Under the heading "It's All About the Long Term", Jeff Bezos wrote:

"We believe that a fundamental measure of our success will be the shareholder value we create over the *long term*. This value will be a direct result of our ability to extend and solidify our current market leadership position. The stronger our market leadership, the more powerful our economic model. Market leadership can translate directly to higher revenue, higher profitability, greater capital velocity, and correspondingly stronger returns on invested capital.

Our decisions have consistently reflected this focus. We first measure ourselves in terms of the metrics most indicative of our market leadership: customer and revenue growth, the degree to which our customers continue to purchase from us on a repeat basis, and the strength of our brand. We have invested and will continue to invest aggressively to expand and leverage our customer base, brand, and infrastructure as we move to establish an enduring franchise.

Because of our emphasis on the long term, we may make decisions and weigh tradeoffs differently than some companies ..."

The stated investment philosophy of Amazon included, for example, the following:[902]

"We will continue to make investment decisions in light of long-term market leadership considerations rather than short-term profitability considerations or short-term Wall Street reactions."

"We will make bold rather than timid investment decisions where we see a sufficient probability of gaining market leadership advantages. Some of these investments will pay off, others will not, and we will have learned another valuable lesson in either case."

"When forced to choose between optimizing the appearance of our GAAP accounting and maximizing the present value of future cash flows, we'll take the cash flows."

900 See, for example, U.S. Congress, House of Representatives, Committee on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law, Investigation Of Competition In Digital Markets: Majority Staff Report and Recommendations, October 6, 2020.

901 Jeffrey P. Bezos, Amazon.com, Inc., 1997 Letter to Shareholders.

902 *Ibid.*

The Amazon business model turned out to be very successful.[903]

Corporate and societal problems. The financial business model lost some of its luster.[904] Jack Welch, also known as Neutron Jack, personified the changing mood in a Financial Times interview about the 2007–2009 financial crisis: "On the face of it, shareholder value is the dumbest idea in the world ... Shareholder value is a result, not a strategy ... Your main constituencies are your employees, your customers and your products."[905]

Moreover, firms increasingly faced the emergence of disruptive technologies and business models. They faced increasing competition from firms that not only were focused on growth and positive network effects but were even able to accept losses thanks to investors that understood the mechanisms of digital economy. There was increasing competition not only from entrepreneurial technology firms with a large burn rate but even from state-controlled or family-controlled companies in Asia. It became more difficult for traditional firms to cope, in particular when they focused on short-term shareholder value or had been taken over by a private equity fund in an LBO. Toys 'R' Us and Hertz are examples of companies that collapsed after being taken over by private equity funds.

The mood in 2019 was that shareholder primacy had contributed to various corporate and societal problems (Chapter 1). The interests of the company reemerged as a focal point of company law discourse (section 2.4.13).

Conclusion. Economic forces matter. It has been easier for a firm to prevail in competition if it has been located in the right country at the right time. US firms benefited from a large and growing market in the second half of the nineteenth century. In the twentieth century, US firms were in the best position to benefit from high demand after the World Wars.

A high level of management discretion helped US and German firms in the late nineteenth century and in the twentieth century. US and German company law achieved this in different ways.

In the US, managerialism faded away in the 1970s as institutional shareholding grew. The growing power of institutional investors influenced the corporate narrative. It influenced corporate and board culture, the choice of the theoretical framework, and views on the interpretation of company law.

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903 See, for example, Dave Lee, The Amazon machine: Jeff Bezos's revolution – and complicated legacy. Financial Times, 5 February 2021; Jamie Powell, Tesla and the Amazon fallacy. Financial Times, 14 July 2020; The Economist, Herd instincts, 20 April 2019; Kenney M, Zysman J (2019).

904 See Blair MM (2003); Blair MM, Stout LA (1999).

905 Francesco Guerrera, Welch condemns share price focus. Financial Times, March 12, 2009.

The problems with shareholder primacy became evident after the financial crisis of 2007–2009 and in digital economy. The interests of the company re-emerged as a focal point of company law discourse (section 2.4.13).

2.4.13 The Interests of the Company

In the past, the choice of design principles has depended on the interests of the state and the narrative of economic forces (section 2.4.12), among other things. In the technical sense, much of company law discourse has focused on what could be perceived as the interests of the company or as the corporate purpose. The interests of the company have been interpreted in different ways in continental European and US company law discourse. The key difference relates to the notion of the firm. The difference in recognising the notion of the firm (das Unternehmen, l'entreprise) in continental Europe v US has had a major influence on company law and practice and hampered mutual understanding to this day.

The economic relevance of the interests of the company. The question of the interests of the company may have had a connection to long-term economic outcomes. In 1870, the US, the UK, Germany, and France accounted for 79% of the world's industrial output.[906] Germany became the leading manufacturing country in Europe by the end of the nineteenth century.[907] Both the US and Germany experienced fast growth in manufacturing before the depression of the 1930s.[908] In contrast, the UK's share of the world's industrial production collapsed.

Such changes in manufacturing success seem to mirror at least two things. The first is the emergence of the modern business enterprise in the US and Germany.[909] Chandler defined the modern industrial firm as "a collection of operating units, each with its own specific facilities and personnel, whose combined resources and activities are coordinated, monitored, and allocated by a hierarchy of middle and top managers".[910] According to Chandler, the growth of industrial production in the US and Germany was partly caused by organisational capabilities: "Such organizational capabilities provided a dynamic for growth that helped to make the economies of the United States and Germany, in the three decades before World War I, the most productive and most competitive in the

906 Chandler AD (1990) p 3.
907 Rathenau (1917a) p 11: "Durch die Epoche des Aufschwungs im letzten Viertel des vorigen Jahrhunderts ist Deutschland das Land der europäischen Großunternehmung geworden ..."
908 Chandler AD (1990) p 4.
909 *Ibid.*, p 12.
910 *Ibid.*, p 15.

world."[911] The same organisational capabilities helped Germany to recover after World War I and World War II. After the Second World War, such organisational capabilities "became even more central to the competitiveness of enterprises, industries, and economies, as expansion into new geographical and product markets became the primary routes to growth for the modern industrial enterprise, and as such multinational and inter-industry expansion intensified competition in many markets".[912]

The second thing influencing manufacturing success is the recognition of the interests of the firm in company law and corporate practice. Interestingly, both US law and German law facilitated the growth of firms, but they achieved it in different ways by using different functional equivalents.

In German and French company law, one of the fundamental design principles is the distinction between the firm (das Unternehmen, l'entreprise) and the legal entity. Board members have had a legal duty to act in the interests of the firm (Unternehmensinteresse, l'intérêt social). The separation of functions and the recognition of the interests of the firm have made it possible to develop organisational capabilities in the interests of the firm.

In US company law, however, there was and still is no distinction between the notions of the legal entity and the firm. These terms have been used interchangeably. One might think that this should have hampered the development of organisational capabilities in the interests of the firm. It turned out that it did not have such an effect, because there used to be a functional equivalent protecting management and the interests of the firm in the US. Management was long protected by the irrevocable nature of the corporate charter (*Dartmouth College*), the practice of vesting all powers in the board, dispersed share ownership, and a culture that favoured the managerial business model. In effect, the interests of the firm were protected until the 1970s.

Legal relevance of the interests of the company. The interests of the company have not always been relevant in company law.

In a partnership or limited partnership, the partners agreed on the terms of the company and their mutual relationships. When the founding of limited-liability companies was subject to state authorisation, the interests that prevailed were state interests, that is, the public purpose. Moreover, the notion of the interests of the company was not yet relevant in the mid-nineteenth century

911 Chandler AD (1990) pp 595–596.
912 *Ibid.*, p 596.

when the number of shareholders still was small and shareholders were responsible for management and monitoring.[913]

The notion of the interests of the company became important after the liberalisation of incorporation and the separation of share ownership, monitoring, and management. The interests of the company could be used as: a dynamic duty (that lays down the culture for the exercise of corporate powers); a limitation of the powers of corporate bodies and representatives (that is a test to determine to what extent somebody acts as or on behalf of the company, what actions can be attributable to the company, or what actions can be binding on the company or "ultra vires"); or a binding standard (that is a test to determine when company representatives are responsible for loss or damage caused to the company).

This made the notion of the interests of the company the key design principle in company law. The key design principle answers the question in whose interests company insiders should act. After this key question has been answered, it becomes easier to regulate, in a rational way, corporate-governance-related issues and, due to the matrix nature of company law, even other company law issues (section 2.3.3). The choice of the key design principle for company law depends on economic and political preferences, that is, the societal objective that carries the highest relative weight.

Company laws customarily state that the board shall act in the interests of the company. Since the company is a legal entity that can be used as a legal tool by various kinds of actors and entities to foster their own respective interests, the question is whose interests shall prevail.

In the nineteenth century and the first half of the twentieth century, the most important choice was whether to foster the interests of shareholders or the business interests of the firm. There has been a major difference between the continental European and American discourses in this respect. The difference has been described as a matter of kind rather than a matter of degree.[914]

Interestingly though, the duty to act in the interests of the firm in continental Europe had a functional equivalent in the US until the 1970s when the weaknesses of US company law were exposed. The US narrative changed after the watershed year of 1976. The financial business model became dominant in the 1980s.

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913 See, for example, Articles 1 and 15 of the French law of 23 May 1863 (Loi du 23 mai 1863 sur les sociétés à responsabilité limitée); Article 32 of the law of 24 July 1867 (Loi du 24 juillet 1867 sur les sociétés commerciales); point 6 of Article 209 of ADHGB 1870; Chandler AD (1962) p 19.
914 Alcouffe A, Alcouffe C (1997) p 91.

After the financial crisis of 2007–2009, the regulation of corporate governance in banks was a major step towards the reception of the continental European approach. In its Corporate Governance Principles for Banks from July 2015, Basel Committee on Banking Supervision distinguished between a bank and its stakeholders. The functioning of a bank should be "safe and sound".[915] Among stakeholders, "shareholders' interest would be secondary to depositors' interest".[916] The primary objective of corporate governance was stated as "safeguarding stakeholders' interest in conformity with public interest on a sustainable basis."[917] The importance of this statement did not go lost on corporate governance scholars.[918]

After the emergence of problems caused by the financial business model, US discourse started to gravitate towards the German and continental European position with a breakthrough in 2019 when the Business Roundtable rejected shareholder primacy.

We can now have a brief look at some aspects of German, French, US, and English law, as well as the Shareholder Rights Directive (SRD II) and so-called "sustainable corporate governance" in the EU. The choice of these countries and the two regulatory projects may be enough to give an idea of the evolution of the discourse and understand what works.

German law. In Germany, the wording of several provisions of the ADHGB 1884 implicitly recognised the business interests of the firm. The business interests of the firm were reflected in the functions of the management board and the supervisory board, and in the required standards.

First, if the firm uses a legal entity as a tool, somebody should act as or on behalf of the legal entity.[919] According to the wording of the ADHGB 1884, the

915 Basel Committee on Banking Supervision (2015) paragraphs 1 and 5.
916 *Ibid.*, paragraph 2.
917 *Ibid.*, paragraph 2.
918 Hopt KJ (2019a) III.1(c): "This position, one shared by national and international banking agencies, is a clear rejection of the dominant viewpoint in Anglo-Saxon and most international corporate governance literature. As a consequence, a specific law for banking and financial markets companies, eg as to their board of directors, has been emerging. This has two far-reaching consequences. First, for banks and other financial institutions the traditional company law issues are on the verge of being fundamentally reconsidered, stiffened, and supervised by the competent regulatory agencies ... Second, and even more far-reaching, the repercussion of this into the theory and practice of non-financial companies is at stake." See also Hopt KJ (2021).
919 Mäntysaari P (2005) p 17; Mäntysaari P (2010a) p 166; Mäntysaari P (2012) p 103.

legal entity was represented by its management board (Vorstand) in dealings with company outsiders and insiders.[920]

Second, since there is an organisation, power must be allocated between corporate bodies.[921] The main duty of the management board was defined as management (Geschäftsführung). The main duty of the supervisory board was defined as the monitoring of the management board (rather than management).[922] Where shareholders in general meeting had a right to vote on an issue, they voted yes or no after the management board and/or the supervisory board had submitted a proposal.

Third, these representatives should act in particular ways.[923] The ADHGB 1884 laid down the standard of these activities. The standard was the diligence of a proper businessman (die Sorgfalt eines ordentlichen Geschäftsmanns). This standard applied both to members of the management board[924] and to members of the supervisory board.[925] Interestingly, even shareholders owed a duty of loyalty (Treuepflicht) to the company under the "Treu und Glauben" provision of the German civil code (§ 242 BGB) to prevent the abuse of rights.

Generally, German company law distinguishes between three things: the legal entity, the firm, and shareholders. In 1917, Walter Rathenau described how shareholders were not the owners of the firm,[926] how shareholders could have short-term interests that are in conflict with the interests of the firm,[927] and how shareholders could have conflicting interests inter se.[928]

German company law briefly tested shareholder primacy. In 1908, the Reichsgericht stated in the *Hibernia* case that "a majority is a majority".[929]

In the 1920s and after bad experiences, the Reichsgericht nevertheless gave up its earlier position[930] and started a line of cases that constrained the behaviour of shareholders in relation to the company under § 242 (Treu und Glauben)

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920 Article 227(1) of the ADHGB 1884: "Die Aktiengesellschaft wird durch den Vorstand gerichtlich und außergerichtlich vertreten."

921 Mäntysaari P (2005) pp 30 – 31; Mäntysaari P (2010a) p 167; Mäntysaari P (2012) p 103.

922 Article 225(1) of the ADHGB 1884: "Der Aufsichtsrath hat den Vorstand bei seiner Geschäftsführung in allen Zweigen der Verwaltung zu überwachen und zu dem Zweck sich von dem Gange der Angelegenheiten der Gesellschaft zu unterrichten ..."

923 Mäntysaari P (2005) p 17; Mäntysaari P (2010a) p 166; Mäntysaari P (2012) p 103.

924 Article 241(2) of the ADHGB 1884.

925 Article 226(1) of the ADHGB 1884.

926 Rathenau W (1917a) p 29.

927 *Ibid.*, pp 25 – 26.

928 *Ibid.*, pp 26 – 28.

929 RGZ 68, 236 (246) (Hibernia).

930 RGZ 107, 72 and RGZ 107, 202 of 1923.

and § 826 (sittenwidrige vorsätzliche Schädigung) of the German civil code (Bürgerliches Gesetzbuch, BGB).[931] Shareholder primacy was rejected and replaced by a doctrine that recognised the interests of the firm as the primary interests served by company law.

According to the doctrine "das Unternehmen an sich",[932] the firm exists and has its own interests (Unternehmensinteresse). These interests matter a great deal. Large firms are responsible for important societal functions and their existence is in the public interest.[933] The company is a legal entity that has no interests of its own. The company is just used as the "carrier" of the firm (Unternehmensträger).

The interests of the firm and constraints on the exercise of the powers of shareholders under new case law were recognised in the 1930 preparatory works for a company law reform.[934]

The relevant interests were explicitly set out in the company law reform of 1937. According to the wording of the Aktiengesetz of 1937, the management board had a duty to manage the company in a way that benefited the firm and its employees ("das Wohl des Betriebes und seiner Gefolgschaft") and was in the public interest of the nation and the state ("der gemeine Nutzen von Volk und Reich").[935] The wording was not only influenced by the doctrine

931 RGZ 146, 71, 76; RGZ 146, 385, 395; RGZ 158, 248, 254; BGHZ 18, 350, 365. See also BGHZ 103, 184 (Linotype) (majority shareholders owe duties to minority shareholders) and BGHZ 129, 136 (Girmes) (minority shareholders owe duties as well).

932 For a summary of critical remarks, see Fischer CE (1955) pp 101–106.

933 Rathenau W (1917a) pp 38–39: "[D]ie Großunternehmung ist heute überhaupt nicht mehr lediglich ein Gebilde privatrechtlicher Interessen, sie ist vielmehr, sowohl einzeln wie in ihrer Gesamtzahl, ein nationalwirtschaftlicher, der Gesamtheit angehöriger Faktor, der zwar aus seiner Herkunft, zu Recht oder zu Unrecht, noch die privatrechtlichen Züge des reinen Erwerbsunternehmens trägt, während er längst und in steigendem Maße öffentlichen Interessen dienstbar geworden ist und hierdurch sich ein neues Daseinsrecht geschaffen hat. Seine Fortbildung im gemeinwirtschaftlichen Sinne ist möglich, seine Rückbildung zur reinprivatwirtschaftlichen Bindung oder seine Aufteilung in kleine Privatpartikel ist undenkbar."

934 Reichsjustizministerium (1930) p 94: "Von diesem Gedanken ausgehend, erkennt der Entwurf den in der Rechtsprechung entwickelten Grundsatz als berechtigt an, dass die Interessen des Unternehmens als solchem ebenso schutzbedürftig sind wie das individuelle Interesse des einzelnen Aktionärs. Bei sachgemäßer Verwaltung des Unternehmens und richtiger Einstellung der einzelnen Aktionäre gibt es in Wahrheit einen Interessengegensatz zwischen dem Unternehmen und seinen Aktionären nicht." Cited in Fleischer H (2018d) p 708.

935 § 70(1) of the AktG 1937: "Der Vorstand hat unter eigener Verantwortung die Gesellschaft so zu leiten, wie das Wohl des Betriebes und seiner Gefolgschaft und der gemeine Nutzen von Volk und Reich es fordern."

"das Unternehmen an sich".[936] In the preparatory works of the Act, it was regarded as responsible management.[937]

In the Aktiengesetz of 1965, the duty of the management board was limited to the management of the company,[938] but the continued application of the principle that the company should be managed in a way that benefits the firm was regarded as a self-clarity.[939] The omission of shareholder and employee interests in the wording was intentional.[940] The duty to act in the interests of the firm was confirmed by the Federal Supreme Court (Bundesgerichtshof, BGH) and the Federal Constitutional Court (Bundesverfassungsgericht, BVerfG).[941] In the *Mannesmann* decision of 2005, the BGH said that the interests of the firm ("Unternehmensinteresse") are recognised as a binding standard for business decisions: "Das Unternehmensinteresse ist bei unternehmerischen Entscheidungen als verbindliche Richtlinie anerkannt."[942] This does not exclude the duty to act in the public interest. The public interest is addressed by the German Constitution (Grundgesetz für die Bundesrepublik Deutschland). On one hand, the Constitution guarantees right to property.[943] On the other, there are, in the public interest, constraints on the use of property rights.[944]

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936 See Fleischer H (2018a) p 6 and Rathenau W (1917a) p 62: "Auch dem Wesen der Unternehmung wird nicht die Verstärkung des privatwirtschaftlichen Gedankens beschieden sein, sondern die bewußte Einordnung in die Wirtschaft der Gesamtheit, die Durchdringung mit dem Geiste der Gemeinverantwortlichkeit und des Staatswohls."

937 Amtliche Begründung § 70: "Aus dem Recht des Vorstandes zu Leitung der Gesellschaft folgt seine Pflicht, für das Wohl der Gesellschaft, zu dem auch die Belange der Aktionäre gehören, zu sorgen und sich für dieses Ziel tatkräftig einzusetzen. Richtlinien für die Leitung der Gesellschaft ist nach § 70 Abs. 1 das Wohl des Betriebes und seiner Gefolgschaft und der gemeine Nutzen von Volk und Reich. Die Wahrung dieser Richtlinien gehört zu den Grundsätzen einer verantwortungsvollen Wirtschaftsführung."

938 § 76(1) of the AktG 1965: "Der Vorstand hat unter eigener Verantwortung die Gesellschaft zu leiten."

939 See Spindler G (2008); Fleischer H (2018a) p 10: "Während der vergangenen fünf Jahrzehnte ist die Frage nach der maßgeblichen Richtschnur für das Vorstandshandeln nur selten praktisch geworden. Rechtsprechung und herrschende Lehre gehen von einer stillschweigenden Fortgeltung des § 70 Abs. 1 AktG 1937 aus und befürworten eine interessenpluralistische Zielkonzeption."

940 See Fleischer H (2018a) p 9.

941 BGHZ 64, 325, 329, 332 (Bayer); BVerfGE 50, 290. See also BGHZ 76, 191, 194 (Riegeler Bier); BGHZ 83, 144, 149 (Dynamit Nobel); BGHZ 83, 106, 121 (Siemens); BGHZ 71, 40, 44 (Kali und Salz); BGHZ 125, 239, 244 (Deutsche Bank); BGHZ 136, 133, 139 (Siemens/Nold). See also Spindler G (2008); Fleischer H (2018d) p 719.

942 BGHSt 50, 331, 338 (Mannesmann); Fleischer H (2018d) p 719.

943 Article 14(1) of the German Constitution.

944 Article 14(2) of the German Constitution. See Fleischer H (2018a) p 7.

In Germany, shareholders owe a duty of loyalty to the company. The existence of such a duty can be explained by the interests of the firm. The duty is part of a procedural mechanism that protects the firm.[945] The existence of such a duty cannot be explained by economic of theories of the firm that emerged much later. Neither can its existence be explained by corporate governance models that are based on shareholder primacy and fail to explain the existence, function, and duties of shareholders.[946]

To this day, the statutory duty to act in the interests of the company means a statutory duty to act in the interests of the firm. It is part of the German Corporate Governance Code 2020. According to the Code, this duty applies to all members of the management board and the supervisory board.[947] A self-clarity, it does not exclude taking into account the interests of employees, shareholders, and society as a whole.[948] Neither does it exclude ethical behaviour.[949] The duty to act in the interests of the firm has without doubt contributed to the success of German firms and very large German trade surpluses in the years before the covid-19 crisis.

This said, some market participants obviously have powerful economic incentives to lobby for the reception of the contractual theory of the firm and shareholder primacy. German company law scholarship has not remained totally immune to shareholder primacy. The "contractual turn" was popular in company

945 See Cahn A (2017) § 16.04[B] pp 355–356 and § 16.02 p 348: "According to traditional doctrine, these rights are essential components of the membership granted to shareholders so that they can participate in the governance of the company in order to promote the success of its business. An application of these rights for purposes other than or opposed to the pursuit of the common purpose for which the company was established constitutes an abuse of these rights and a violation of the fiduciary duty."

946 Compare *ibid.*, § 16.01 pp 347–348.

947 German Corporate Governance Code 2020, Grundsatz 10: "Die Anteilseignervertreter und die Arbeitnehmervertreter sind gleichermaßen dem Unternehmensinteresse verpflichtet." Grundsatz 19: "Die Mitglieder von Vorstand und Aufsichtsrat sind dem Unternehmensinteresse verpflichtet."

948 See the government bill for the Aktiengesetz of 1965. Deutscher Bundestag 4. Wahlperiode, Drucksache IV/171, 3 February 1962, p 121: "Zu § 73 ... Daß der Vorstand bei seinen Maßnahmen die Belange der Aktionäre und der Arbeitnehmer zu berücksichtigen hat, versteht sich von selbst und braucht deshalb nicht ausdrücklich im Gesetz bestimmt zu werden. Gleiches gilt für die Belange der Allgemeinheit. Gefährdet der Vorstand durch gesetzwidriges Verhalten das Gemeinwohl, so kann die Gesellschaft aufgelöst werden (§ 382)."

949 German Corporate Governance Code 2020, Präambel/Foreword: "These principles not only require compliance with the law, but also ethically sound and responsible behaviour (the 'reputable businessperson' concept, Leitbild des Ehrbaren Kaufmanns)." For the problems inherent in the 'reputable businessperson' concept, see Fleischer H (2018a) p 15.

law scholarship before the financial crisis of 2007–2009.[950] However, it did not prevail,[951] as is illustrated by the wording of the German Corporate Governance Code 2020.

Interestingly, the English-language translation of the 2017 version of the Code got this fundamental characteristic of German company law wrong by failing to distinguish between the firm and the legal entity. The firm (das Unternehmen) was translated as "the company" and the interests of the firm (Unternehmensinteresse) as "the company's best interests".[952] This could of course have reflected the fact that some German corporate governance scholars were committed to shareholder primacy and perhaps did not like the distinction between the legal entity and the firm.[953] But this is speculation. It is more important that the mistake was corrected in the German Corporate Governance Code 2020 in which the notion of "das Unternehmen" is translated as "the enterprise".

The preamble of the 2019 version of the Code describes the present distinction between the legal entity, the firm (the enterprise), and shareholders under German law as follows:

"Corporate Governance is understood as the legal and factual regulatory framework for the management and supervision of an enterprise. The German Corporate Governance Code … contains principles, recommendations and suggestions for the Management Board and the Supervisory Board that are intended to ensure that the company is managed in the enterprise's best interests. The Code highlights the obligation of Management Boards and Supervisory Boards – in line with the principles of the social market economy – to take into account the interests of the shareholders, the enterprise's workforce and the other groups

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950 See André T Jr (1998); Klages P (2013); Fleischer H (2018d) pp 720–721.

951 See Fleischer H (2018d) pp 724–725.

952 German Corporate Governance Code, version 7 February 2017, Präambel/Foreword: "Der Kodex verdeutlicht die Verpflichtung von Vorstand und Aufsichtsrat, im Einklang mit den Prinzipien der sozialen Marktwirtschaft für den Bestand des Unternehmens und seine nachhaltige Wertschöpfung zu sorgen (Unternehmensinteresse)." "The Code highlights the obligation of the Management and Supervisory Boards to ensure the continued existence of the company and its sustainable value creation in line with the principles of the social market economy (the company's best interests)."

953 See, for example, Hopt KJ (2019a) III.1(c): "The dominant view on the goal of the corporation is long-term profit for the shareholders … In Germany … the management board must weigh in its own discretion the interests of the shareholders, labour and the public good … But even under German law it is clear that the interests of the company and thereby of the shareholders prevails in practice (leaving aside the German path-dependent labour codetermination in the supervisory board). Only in times of financial rescue and insolvency proceedings is it recognized that risk together with governance ('ownership') has been transferred from the owners to the creditors."

related to the enterprise (stakeholders), to ensure the continued existence of the enterprise and its sustainable value creation (the enterprise's best interests). These principles not only require compliance with the law, but also ethically sound and responsible behaviour (the 'reputable businessperson' concept, Leitbild des Ehrbaren Kaufmanns). – By their actions, the company and its governing bodies must be aware of the enterprise's role in the community and its societal responsibility. Social and environmental factors influence the enterprise's success. In the enterprise's best interests, Management Board and Supervisory Board ensure that the potential impact from these factors on company strategy and operating decisions is identified and addressed."[954]

French law. French law resembles German law in protecting the interests of the firm. You can find the same key design principle in both countries. In France, the company's supervisory board (le conseil d'administration),[955] executive board (le directoire),[956] and general manager (le directeur general)[957] have a duty to act on behalf of the company within the objects of the company (l'objet social). The company is seen as having its own interests distinct from the interests of stakeholders (including shareholders and other stakeholders). The interests of the company mean the interests of the enterprise (l'entreprise). The fundamental interest of the company is the long-term survival of the enterprise. This was stated both in the Viénot report (Viénot I, 1995)[958] and the Bouton report (2002).[959] The Sénard – Notat report (2018)[960] proposed ways to develop these principles further. The reports led to a government bill in 2018[961] and the law of 22 May 2019,[962] also known as loi PACTE.[963]

954 German Corporate Governance Code, version 9 May 2019.
955 Article L. 225–35.
956 Article L. 225–64.
957 Article L. 225–56.
958 Viénot M (1995), I.1: "Dans les pays anglo-saxons, l'accent est principalement mis sur l'objectif de maximisation rapide de la valeur de l'action, alors que, sur le continent européen et en particulier en France, il est plutôt mis sur l'intérêt social de l'entreprise."
959 Bouton D (2002) p 6.
960 Sénard JD, Notat N (2018).
961 Projet de loi relatif à la croissance et la transformation des entreprises (Loi PACTE), AN n° 1088, enregistré à la Présidence de l'Assemblée nationale le 19 juin 2018. Fleischer H (2018d) p 705: "Eine Vorreiterrolle nimmt insoweit Frankreich ein: Dort sieht ein gerade ins Parlament eingebrachter Gesetzesentwurf die Reformulierung der altehrwürdigen Art. 1833 und 1835 Code civil in Bezug auf den intérêt social und die raison d'être der Gesellschaft vor."
962 Loi n° 2019–486 du 22 mai 2019 relative à la croissance et la transformation des entreprises. See Davies P (2020) pp 337–338.
963 PACTE means Plan d'Action pour la Croissance et la Transformation des Entreprises or Action Plan for Business Growth and Transformation.

The origins of current French law lie in the French institutional theory (théorie institutionelle). The institutional theory can trace its roots to the 1930s[964] but became influential in the 1960s. According to Emile Gaillard, a company has its own interests ("un intérêt légitime distinct des intérêts des individus") that can be used as the legal standard for corporate decisions.[965] In the *arrêt Motte* decision of 1946, the Cour de cassation confirmed that the separation of functions between different corporate bodies is a mandatory principle of French company law.[966] In the 1960s, Claude Champaud and the School of Rennes he represented defined the enterprise as a focal point of various interests and entrepreneurial decision-making. The enterprise, that is, an undertaking or firm was understood as an economic entity rather than as a legal entity.[967] This led to a legal theory of "intérêt social". According to Jean Paillusseau, one of its main representatives, controlling shareholders would be able to abuse their position to the detriment of other shareholders, unless their actions we legally constrained by "intérêt social".[968] "Intérêt social" did not mean the interests of shareholders. Paillusseau wrote:

"L'entreprise est un centre d'intérêts. C'est en effet en elle que convergent les intérêts des apporteurs de capitaux, de travail, de connaissances; les intérets de personnes qui lui sont liées, les fournisseurs et les clients par exemple; ou, encore les intérêts des personnes qui sont intéressées par sa vie, comme l'Etat, les consommateurs, les concurrents …"[969]

The theory of "intérêt social" influenced company law. In its famous *Fruehauf* decision of 1968,[970] the Cour d'appel of Paris made it clear that the interests of the company prevail over the interests of shareholders, even if they are majority shareholders, and that a board majority must not take decisions contrary to the interests of the company. The intérêt social found its way into company legislation as well.[971]

964 Gaillard E (1932). See Fleischer H (2018d) p 710; Mäntysaari P (2012) pp 82–83.
965 Gaillard E (1932) p 38; Fleischer H (2018d) p 710.
966 La Cour de cassation, Chambre civil, 4 June 1946 (arrêt *Motte*); Fleischer H (2018d) p 710.
967 Champaud C (1962); Champaud C (1982) pp 101–102: "Problems concerning the concentration of undertakings and the definition of this notion are not new. The present author himself considered them almost twenty years ago and it does not appear that substantial progress in juridical science has been made since then."
968 See Fleischer H (2018d) pp 710–711.
969 Paillusseau J (1967) p 196.
970 S.A. Société Fruehauf-France v. Massardy, [1968] D.S. Jur. 147, [1965) J.C.P. II 14274 bis. See, for example, Craig WL (1970); Muchlinski PT (2007) p 131; Fleischer H (2018d) p 713.
971 Des sociétés en nom collectif, article L. 221–4, al. 1 of the Code de commerce: "Dans les rapports entre associés, et en l'absence de la détermination des ses pouvoirs par les statuts,

The Sénard – Notat report (2018) proposed ways to develop these principles further. According to this report, the interests of the enterprise do not mean general stakeholder interests. However, societal and environmental things do matter.[972] The Sénard – Notat report proposed the amendment of article 1833 of the Code civil to give greated weight to the purpose (intérêt propre) of the enterprise as well as the need to consider societal and environmental circumstances.[973] According to the Sénard – Notat proposals, this rule should apply to companies and article L225–35 of the Code de commerce should be amended accordingly.[974] The maximisation of shareholder value was expressly rejected in the Viénot report and the Sénard – Notat report.[975]

The "intérêt social" is mentioned in the French Corporate Governance Code (the Afep-Medef Code).[976] According to the 2018 version of the Code, the "intérêt social" is that of the enterprise:

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le gérant peut faire tous actes de gestion dans l'intérêt de la société." Des sociétés à responsabilité limitée, article L. 223–18, al. 2 of the Code de commerce. Abus de biens sociaux, article L. 241–3 n° 5 of the Code de commerce. See Fleischer H (2018d) p 715.

972 Sénard JD, Notat N (2018) p 4: "Le rôle premier de l'entreprise n'est pas la poursuite de l'intérêt général, mais des attentes croissantes à l'égard des entreprises sont régulièrement exprimées, avec l'essor des défis environnementaux et sociaux."

973 Sénard JD, Notat N (2018) p 6: "Recommandation n°1 : ajouter un second alinéa à l'article 1833 du Code civil : «[...] La société doit être gérée dans son intérêt propre, en considérant les enjeux sociaux et environnementaux de son activité.»"

974 Sénard JD, Notat N (2018) p 6: "Recommandation n°2 : confier aux conseils d'administration et de surveillance la formulation d'une «raison d'être» visant à guider la stratégie de l'entreprise en considération de ses enjeux sociaux et environnementaux.

L'article L225–35 du Code de commerce serait ainsi complété des mots soulignés : «Le conseil d'administration détermine les orientations de l'activité de la société en référence à la raison d'être de l'entreprise, et veille à leur mise en oeuvre, conformément à l'article 1833 du Code civil». Cette rédaction devra être déclinée pour les conseils de surveillance, les mutuelles, les coopératives, les SAS dotées d'un conseil, etc."

975 Viénot M (1995), I.1; Sénard JD, Notat N (2018) p 3: "Ces témoignages étaient souvent replacés dans une perspective historique de notre continent. L'économie européenne s'est illustrée par un caractère «social» et «responsable», selon les observateurs. Dans ce modèle économique institutionnel et intermédié, l'entreprise tient une place importante. [...] A ce modèle économique d'Europe continentale est souvent opposé le capitalisme anglo-saxon, désintermédié et financiarisé, qui donne une place plus centrale au rôle du marché, ainsi que le capitalisme autoritaire qui émerge dans certains pays. Les «responsabilités fiduciaires» des dirigeants en droit américain sont ainsi interprétées par la plupart des juristes comme incitant à maximiser la valeur du capital pour les actionnaires. Bien que cette obligation n'existe pas en droit français ..."

976 Code de gouvernement d'entreprise des sociétés cotées (the Afep-Medef Code). The code is a collection of recommendations prepared by working parties of the Association Française des

"Le conseil d'administration exerce les missions dévolues par la loi et agit en toute circonstance dans l'intérêt social de l'entreprise.

Il s'attache à promouvoir la création de valeur par l'entreprise à long terme en considérant les enjeux sociaux et environnementaux de ses activités. Il propose, le cas échéant, toute évolution statutaire qu'il estime opportune."[977]

"Le conseil d'administration est mandaté par l'ensemble des actionnaires. Il exerce les compétences qui lui sont dévolues par la loi dans l'intérêt social de l'entreprise ..."[978]

As has been discussed above, the enterprise is not the same as the legal entity. In the English-language translation of section 1.1 of the Afep-Medef Code (2018), the interests of the enterprise have misleadingly been translated as "the corporate interest" or the interests of "the company".[979] In section 5.1 of the Code, the interests of the enterprise have misleadingly been translated as "the corporate interest".[980] A similar mistake in the German Corporate Governance Code was corrected in the 2020 Code.

While the contractual theory of the firm had some influence on company law scholarship before the financial crisis of 2007–2009,[981] it clearly did not prevail in France.[982] According to the Sénard – Notat report, France proudly regards itself as a pioneer of corporate social responsibility (CSR).[983]

Entreprises Privées (Afep) and the Mouvement des Entreprises de France (Medef). The Afep-Medef Code may be designated by listed companies as their reference code pursuant to articles L.225–37 and L.225–68 of the Code de commerce.

977 Section 1.1 of the Afep-Medef Code (2018).

978 Section 5.1 of the Afep-Medef Code (2018). See also Fleischer H (2018d) p 726: "Dieser Wandel lässt sich auch an der Entwicklung des wichtigsten französischen Corporate Governance Kodex, des Code AFEP-MEDEF, ablesen. In seiner Fassung von 2013 nahm er in Art. 5.1 nur auf den intérêt social Bezug, ehe er in der Version von 2016 den Unternehmensbezug ergänzte ..."

979 Section 1.1 of the Afep-Medef Code (2018): "The Board of Directors performs the tasks conferred by the law and acts at all times in the corporate interest. It endeavours to promote long-term value creation by the company by considering the social and environmental aspects of its activities. If applicable, it proposes any statutory change that it considers appropriate."

980 Section 5.1 of the Afep-Medef Code (2018): "The Board of Directors is mandated by all of the shareholders. It exercises the powers that have been assigned to it by law in the corporate interest ..."

981 See Fleischer H (2018d) pp 722–723.

982 See *ibid.*, pp 725–726.

983 Sénard JD, Notat N (2018) p 4: "La France compte en Europe et au niveau mondial, parmi les pays pionniers de la responsabilité sociale et environnementale des entreprises (RSE)." Fleischer H (2018d) pp 726–727: "Der Beginn des neuen Milleniums markiert zugleich den allmählichen Aufstieg eines neuen wirkungsmächtigen Grundgedankens im Gesellschaftsrecht: der

The Sénard – Notat report developed the notion of the raison d'être of an enterprise, that is, the reason for its existence. An enterprise exists for reasons that can be summed up in its strategy and are not reduced to profit.[984] The raison d'être of a company complements its objects clause and is distinct from the interests of shareholders.[985] The recommendations of the report included adopting the raison d'être and an enterprise with a mission ("entreprise à mission").[986]

The law of 22 May 2019 (loi PACTE)[987] permits French companies to embody in their articles a raison d'être meaning a statement of the principles to which

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Corporate Social Responsibility (CSR), die von Anfang an eng mit dem Unternehmensinteresse verwoben war. Eine internationale Vorreiterrolle spielte dabei das französische Recht, das der Responsabilité Sociale des Entreprises (RSE) in vielen legislatorischen Reformschritten zu mehr Aufmerksamkeit verholfen hat."

984 Sénard JD, Notat N (2018) p 3: "Au-delà de ces tiers prenant part à l'entreprise, la conviction portée par ce rapport est que le gouvernement d'entreprise lui-même doit incorporer ces considérations dans sa stratégie. Il convient pour cela que chaque entreprise prenne conscience de sa «raison d'être» . […] Chaque entreprise a donc une raison d'être non réductible au profit. C'est d'ailleurs souvent lorsqu'elle la perd que les soucis financiers surviennent. De même que la lettre schématise l'esprit, le chiffre comptable n'est qu'un révélateur d'une vitalité de l'entreprise qui se joue ailleurs. La raison d'être se définit comme ce qui est indispensable pour remplir l'objet social, c'est-à-dire le champ des activités de l'entreprise. Elle est à l'entreprise ce que *l'affectio societatis*, bien connu des juristes, est aux associés : une volonté réelle et partagée. Si quelques-uns pourraient être tentés d'en faire un objet marketing, la raison d'être fournira à la plupart des conseils d'administration un guide pour les décisions importantes, un contrepoint utile au critère financier de court-terme, qui ne peut servir de boussole."

985 Sénard JD, Notat N (2018) pp 6–7: "La raison d'être exprime ce qui est indispensable pour remplir l'objet de la société. Cet « objet social » étant devenu un inventaire technique, il est nécessaire de ramasser en une formule ce qui donne du sens, à l'objet collectif qu'est l'entreprise. C'est un guide pour déterminer les orientations stratégiques de l'entreprise et les actions qui en découlent. Une stratégie vise une performance financière mais ne peut s'y limiter. La notion de raison d'être constitue en fait un retour de l'objet social au sens premier du terme, celui des débuts de la société anonyme, quand cet objet était d'intérêt public. De même qu'elle est dotée d'une volonté propre et d'un intérêt propre distinct de celui de ses associés, l'entreprise a une raison d'être."

986 *Ibid.*, p 8: "Recommandation n°11 : confirmer à l'article 1835 du Code civil la possibilité de faire figurer une «raison d'être» dans les statuts d'une société, quelle que soit sa forme juridique, notamment pour permettre les entreprises à mission. Un deuxième alinéa serait ainsi adjoint : «L'objet social peut préciser la raison d'être de l'entreprise constituée.»" Notat N (2018) p 8: "Si les organes de délibération collective de toute société commerciale doivent se prononcer sur la raison d'être de l'entreprise, il n'est pas obligatoire de la faire figurer dans les statuts. Il s'agit d'une option ouverte à celles voulant devenir «entreprise à mission»."

987 Loi n° 2019–486 du 22 mai 2019 relative à la croissance et la transformation des entreprises.

the company is committed and to the furtherance of which it expects to devote resources in the course of its business.[988]

The first company of the CAC40 to do so was Atos SE. On 30 April 2019, its general meeting approved the following raison d'être proposed by the company's board: "Atos's mission is to help design the future of the information technology space. Its services and competences are underpinned by excellence in the advance of scientific and technological knowledge and research and in its commitment to learning and education. Across the world Atos enables its customers and all who live and work in the industry, to grow and prosper in a safe, secure and sustainable environment."[989]

Orange submitted the following raison d'être to shareholders for approval at the annual general meeting in May 2020: "As a trusted partner, Orange gives everyone the keys to a responsible digital world. Our mission is to ensure that digital services are well thought-out, made available and used in a more caring, inclusive and sustainable way in all areas of our business. Orange does everything in its power to ensure people and organisations enjoy a more autonomous, secure digital life. Through the engagement and expertise of the Group's teams, Orange employs innovative technologies and services everywhere, and for everyone."[990]

Such statements in the articles of association raise the question of their connection to the enforcement and sanction mechanism of company law. On one hand, the sanction mechanism gives incentives to dilute the raison d'être by keeping it very general. On the other, it gives an opportunity to make the raison d'être more binding and enforceable. In regulated industries, it can connect market regulation with the company law enforcement and sanction mechanism.[991] But at the end of the day, company laws for good reasons make it difficult to enforce sanctions against management (section 2.4.11).[992]

US law. In common law countries, the question is about the corporate objective and the interests of the company. The discourse suffers from the lack of

988 Davies P (2020) pp 337–338.

989 *Ibid.*, p 337.

990 Orange reveals its co-created purpose. Press release, 10 December 2019.

991 Davies P (2020) pp 338–339.

992 See even Hart O, Zingales L (2017) p 260: "Even with 'standard' corporations, where value maximization is taken to be the right goal, the business judgment rule effectively shields boards from most fiduciary duty suits (unless the board enriches itself or uses explicit language to the effect that it is not maximizing value). We can only imagine how much more difficult it would be to sue for failure to stick to a mission statement, or to maximize shareholder welfare, a very slippery concept to define and measure."

conceptual clarity. No distinction is made between the legal entity and the business organisation of the legal entity, that is, the firm (das Unternehmen, l'entreprise).[993] This leaves only the legal entity that is regarded as a legal fiction and shareholders that are regarded as real.

To balance shareholder interests with constraints, scholars have turned to stakeholder interests. In US corporate law scholarship, there is a "continuing and longstanding debate … among those who favor shareholder primacy, those who favor management discretion, and those who believe that corporations have a social responsibility to other constituencies, such as the corporation's employees, and the wider public interest".[994] The only choice seems to be between the maximisation of shareholder wealth and the interests of stakeholders.

What is missing is the recognition of the interests of the business organisation that we here call the firm.[995] These interests seem to be reduced to management discretion.

Lynn Stout has pointed ut that corporate law does not impose any enforceable legal duty on corporate directors or executives of public corporations to maximize profits or share price: "As far as the law is concerned, maximizing shareholder value is not a requirement; it is just one possible corporate objective out of many. Directors and executives can run corporations to maximize shareholder value, but unless the corporate charter provides otherwise, they are free to pursue any other lawful purpose as well. Maximizing shareholder value

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993 For the terminology in US discourse, see, for example, Jensen MC, Meckling WH (1976) p 311 (economics); Orts EW (2015) pp 28 and 53 (law); Wilkins M (2005) p 45 footnote 1 (business history): "I prefer the term 'enterprise' to firm, company, corporation, or business because the entity over boders is often a cluster of firms, companies, corporations, or all of these; 'business' implies both the institution and the activity … I use the nouns (enterprise, firm, company, corporation, and business) … interchangeably." For a really powerful example of the non-existence of the notion of the firm in US corporate governance discourse, see Macey JR (2013).

994 Bratton WW, Wachter ML (2008) p 100.

995 See, for example, Eisenberg MA (1969) p 21 on managerialism; Schumer C, Sanders B (2019): "From the mid-20th century until the 1970s, American corporations shared a belief that they had a duty not only to their shareholders but to their workers, their communities and the country that created the economic conditions and legal protections for them to thrive. It created an extremely prosperous America for working people and the broad middle of the country." Stout LA (2002b) p 1200: "So we have learned in the decades following the Berle-Dodd debate that the issue really boils down to this: which is worse? To require directors to maximize shareholder wealth, even in cases … where shareholder wealth maximization is inefficient? Or to allow directors to look at the interests of nonshareholder 'stakeholders,' recognizing that they may use their enhanced discretion to serve themselves?"

is not a managerial obligation, it is a managerial choice."[996] This made Stout's adversary Jonathan Macey say that "shareholder value is not a concern to anybody because managers don't have to maximize shareholder value."[997]

The conceptual unclarity nevertheless has had major real-life effects. Representatives of institutional economics and shareholder primacy used to assume (and mostly still do) that shareholders are the company. The financial crisis of 2007–2009 left some of them puzzled. Alan Greenspan, former chairman of the FED, put it this way: "Those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief." He continued: "I made a mistake in presuming that the self-interest of organisations, specifically banks, is such that they were best capable of protecting shareholders and equity in the firms ... I discovered a flaw in the model that I perceived is the critical functioning structure that defines how the world works."[998] The major flaw was the assumption that the interests of a bank are the interests of its shareholders, that a bank has no interests of its own, and that the business model of a bank whose interests are aligned with the perceived interests of its shareholders is sustainable.[999]

The broad US discourse can be illustrated with some key examples. They include the case *Dodge v Ford*, the debate between Berle and Dodd, the reception of institutional economics in US company law, the balancing of interests according to Blair and Stout v the policy of Business Roundtable, the listing rules of the Long-Term Stock Exchange (LTSE), the investment policy of BlackRock, and the Netflix Culture.

Dodge v Ford. The case *Dodge v Ford*[1000] related to the choice between shareholder primacy and the interests of the firm. The question was whether there was a duty to maximise the short-term financial benefits of shareholders or the long-term business interests of Ford Motor Company. Henry Ford wanted to reduce dividends in order to reduce the sales price of Ford cars, increase sales, and secure the jobs of employees.[1001] The court did not buy Mr. Ford's arguments. What he did was not in the interests of the company's shareholders according to the

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996 Stout LA (2012) p 32.

997 Macey JR (2013) pp 912–913.

998 Greenspan A (2008).

999 This was corrected by BIS. Basel Committee on Banking Supervision (2015).

1000 Dodge v Ford Motor Company 170 NW 668 (Mich, 1919). See Quinn J (2015).

1001 See also Jack Welch in a Financial Times interview about the 2008 financial crisis: "On the face of it, shareholder value is the dumbest idea in the world ... Your main constituencies are your employees, your customers and your products." Francesco Guerrera, Welch condemns share price focus. Financial Times, 12 March 2009.

court's opinion. The court stated that "the business corporation is organised and carried on primarily for the profit of stockholders" and that "[t]he powers of directors are to be employed for that end".

The business interests of the firm were thus rejected. Obviously, firms tend to benefit from growing sales and greater sales tend to benefit shareholders in the long term. The question of product pricing is a core management matter. Moreover, firms benefit from a skilled and experienced workforce.

Regardless of *Dodge v Ford* and corporate law scholarship, firms that were competitive survived and firms that were not competitive failed. To survive, firms had to do things that made business sense.

US companies could do things that made business sense because of the strict interpretation of the company's foundational documents (*Dartmouth College*), the practice of vesting all powers in the board, the practice of delegating powers to professional managers,[1002] and the limitation of the liability of board members for breach of duty of care.[1003] The interests of profit-maximising shareholders did not need to play any central role for firms that survived the test of long-term market competition.[1004]

Moreover, the large and growing US market contributed to the growth of US firms and increased their economies of scale. As a big country, the US produced big firms that were competitive in global markets as well.

Berle and Dodd. While professional managers focused on what made business sense, the choice between the shareholder value approach and the interests of stakeholders became a hot topic in US company law discourse. It is customary to refer to a debate between Adolf Berle and Merrick Dodd in the early 1930s.[1005]

Berle chose a very narrow perspective. He summed up his values in the opening sentence of his 1931 essay: "It is the thesis of this essay that all powers

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1002 This is still the case. See § 8.01(b) of the Model Business Corporation Act (2016 Revision) (December 9, 2016).

1003 Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984). Allen WT, Jacobs JB, Strine LE Jr (2001) pp 871–872: "… Delaware law traditionally treated claims that directors breached their duty of care differently from claims that directors breached their duty of loyalty … [T]he law reflected the policy concern that an overly aggressive approach to enforcing the duty of care could deter risk-taking and discourage service on corporate boards by qualified candidates. Thus, in Aronson v. Lewis, the Delaware supreme court announced that the standard of review of claims that directors breached their duty of care is 'gross negligence,' a standard facially far more lenient than the simple 'negligence' standard of conduct."

1004 See also Dodd M (1932) and Jacobs JB (2011) pp 1647 and 1649 on a "golden era" with patient capital, product innovation, and the absence of a market for corporate control.

1005 Berle AA (1931); Dodd M (1932). See also Bratton WW, Wachter ML (2008); Stout LA (2002b); Keay AR (2011); Quinn J (2015).

granted to a corporation or the management of a corporation, or to any group within the corporation, are necessarily and at all times exercisable only for the ratable benefit of all the shareholders as their interest appears." Berle's arguments were: directors are trustees for the company's shareholders; the power to run the company has been delegated from shareholders to directors; the directors have the sole responsibility to run the corporation in the interests of shareholders; and money is to be made for shareholders.

In contrast, Merrick Dodd chose a more holistic perspective. What Dodd really said seems to have been misinterpreted.[1006] Rather than advocating a stakeholder approach,[1007] Dodd argued for the recognition of rational and reasonable business practices that help firms prosper.

Dodd understood that people are part of society and subject to social norms. It is rational for human beings, in companies and otherwise, to take social norms into account.[1008] Moreover, any businessman needs to take into account the relevant interests.[1009]

Dodd used argumentum ad absurdum to make his case. If companies behave in ways that are not characteristic of human beings – that is, irrationally or contrary to social norms – they will have to be regulated. Since corporate law must not be interpreted in such absurd ways, human beings must be able to act as human beings in companies.[1010] According to Dodd, this was clearly understood

1006 See also Bratton WW, Wachter ML (2008) p 101: "The generally-accepted historical picture puts Berle in the position of being the grandfather of shareholder primacy. Dodd, on the other hand, is cast as the original ancestor of CSR. But this categorization of Berle and Dodd is mistaken-an example of failing to understand old texts in their original context."

1007 For example, Bebchuk LA, Tallarita R (2020): "In legal scholarship, support for stakeholderism goes back to the seminal and influential work of Merrick Dodd."

1008 This point was made even by Weber M (1922).

1009 Dodd M (1932) p 1145: "An individual who carries on business for himself necessarily enters into business relations with a large number of persons who become either his customers or his creditors." Dodd, p 1161: "[T]he association, once it becomes a going concern, takes its place in a business world with certain ethical standards which appear to be developing in the direction of increased social responsibility."

1010 *Ibid.*, p 1162: "The legal recognition that there are other interests than those of the stockholders to be protected does not, as we have seen, necessarily give corporate managers the right to consider those interests, as it is possible to regard the managers as representatives of the stockholding interest only. Such a view means in practice that there are no human beings who are in a position where they can lawfully accept for incorporated business those social responsibilities which public opinion is coming to expect, and that these responsibilities must be imposed on corporations by legal compulsion. This makes the situation of incorporated business so anomalous that we are justified in demanding clear proof that it is a correct statement of the legal situation. Clear proof is not forthcoming."

by those who managed business corporations.[1011] Moreover, he argued that if managers are merely "attorneys for the investors", the protection of other classes who are affected by the corporation's activities must be entrusted to "other hands than those of the managers", making managers non-managers: "Desire to retain their present powers accordingly encourages the latter to adopt and disseminate the view that they are guardians of all the interests which the corporation affects and not merely servants of its absentee owners."[1012]

Dodd pointed out that a company becomes a distinct legal entity upon incorporation and should be viewed as more than just a collection of shareholders. According to Dodd, law treated the company "as an institution directed by persons who are primarily fiduciaries for the institution rather than for its members".[1013] Dodd argued that it was perfectly normal for directors and managers to "act as though maximum stockholder profit was not the sole object of managerial activities".[1014]

Interestingly, Dodd recognised the organisation's self-interest in its own existence and survival: "Modern large-scale industry has given to the managers of our principal corporations enormous power over the welfare of wage earners and consumers, particularly the former. Power over the lives of others tends to create on the part of those most worthy to exercise it a sense of responsibility. The managers, who along with the subordinate employees are part of the group which is contributing to the success of the enterprise by day-to-day efforts, may easily come to feel as strong a community of interest with their fellow workers as with a group of investors whose only connection with the enterprise is that they or their predecessors in title invested money in it, perhaps in the rather remote past."[1015]

This corporate body was not just a legal fiction, Dodd wrote: "If the unity of the corporate body is real, then there is reality and not simply legal fiction in the proposition that the managers of the unit are fiduciaries for it and not merely for its individual members, that they are ... trustees for an institution rather than attorneys for the stockholders."[1016]

1011 *Ibid.*, p 1156: "The view that those who manage our business corporations should concern themselves with the interests of employees, consumers, and the general public, as well as of the stockholders, is thus advanced today by persons whose position in the business world is such as to give them great power of influencing both business opinion and public opinion generally."
1012 *Ibid.*, p 1157.
1013 *Ibid.*, pp 1162–1163.
1014 *Ibid.*, p 1147.
1015 *Ibid.*, p 1157.
1016 *Ibid.*, p 1160.

Both Dodd and Berle built on the notion of trusteeship that has its roots in English common law. What they did not agree on was whom managers are trustees for.[1017]

Berle soon changed his position. In 1932, he argued that management was to act in the public interest.[1018] Ordinary citizens had the right to make a comfortable living and their rights needed to be protected. Private property rights would need to give way in the face of the public interest.[1019] In the same year, Berle and Means built on German law and the work of Rathenau when discussing large corporations.[1020] According to Bratton and Wachter, "[t]he Modern Corporation and Private Property captures Berle in the middle of his metamorphosis from friend of shareholders to advocate of the corporation as an instrument for furthering national social welfare policy".[1021] In 1968, Berle asked: "Why have stockholders?" He did not say that shareholders had any particular function. Instead, he regarded the rights of shareholders as a privilege that "cannot be justified unless most members of the community share it".[1022] Interestingly, this resembled the preparatory works of the German Aktiengesetz of 1965 that had been published a few years earlier.[1023]

Reception of institutional economics. In 1969, Melvin Aron Eisenberg built on the common law notion of agency when he wrote that, "[u]nder the received legal model … no one acts as agent of shareholders … The officers are agents of the board. The board, in turn, is conceived to be an independent institution,

1017 For trusteeship in modern company law discourse, see Blair MM, Stout LA (1999) pp 280–281.

1018 See Bratton WW, Wachter ML (2008) p 118.

1019 *Ibid*., p 111.

1020 See Berle AA, Means GC (1932) Book Four, Chapter IV, citing Rathenau W (1917b). See also Rathenau W (1917b) pp 38–39: "[D]ie Großunternehmung ist heute überhaupt nicht mehr lediglich ein Gebilde privatrechtlicher Interessen …"

1021 Bratton WW, Wachter ML (2008) p 118.

1022 Berle AA (1968) p xxxv. See also Bratton WW, Wachter ML (2008) p 142.

1023 Government bill for the Aktiengesetz of 1965. Deutscher Bundestag 4. Wahlperiode, Drucksache IV/171, 3 February 1962, p 93: "Nur bei einer diesen Grundsätzen entsprechenden Gestaltung des Aktienrechts werden private Eigentümer immer wieder bereit sein, ihr Kapital einer Aktiengesellschaft zur Verfügung zu stellen und so den Bestand und Fortschritt unserer auf der privaten Initiative beruhenden Wirtschaftsordnung zu gewährleisten. Damit wird zugleich der gesellschaftspolitischen Aufgabe, immer weitere Schichten und Kreise unseres Volkes an dem Produktionsvermögen der Wirtschaft zu beteiligen und einer Massierung des Kapitals in Händen weniger Personen entgegenzuwirken, wirksam gedient und eine für die Verwirklichung der Forderung breitester Streuung des Eigentums auf dem Gebiet des Aktienwesens entscheidende Voraussetzung geschaffen."

not directly responsible to shareholders in the manner of an agent."[1024] Moreover, Eisenberg distinguished between the partnership model for the privately-held corporation[1025] and considerations of public policy for the publicly-held corporation.[1026] This was soon to change.

In the 1970s, the growing institutional share ownership increased shareholder power relative to the boards of directors.[1027] Powerful institutional investors that wanted to allocate funds from corporations to shareholders advocated shareholder primacy and based their arguments on neoclassical economics.

According to neoclassical theory, the firm (das Unternehmen, l'entreprise) really does not exist. The company is just a legal fiction with no interests of its own.

In 1972, Alchian and Demsetz argued that shareholders are residual claimants that are owners of the firm. Shareholders own a "bundle of rights: 1) to be a residual claimant; 2) to observe input behavior; 3) to be the central party common to all contracts with inputs; 4) to alter the membership of the team; and 5) to sell these rights, that defines the ownership (or the employer) of the classical (capitalist, free-enterprise) firm". According to Alchian and Demsetz, it is characteristic of the "classical capitalist firm" that it has a "contractual organization … with (a) joint input production, (b) several input owners, (c) one party who is common to all the contracts of the joint inputs, (d) who has rights to renegotiate any input's contract independently of contracts with other input owners, (e) who holds the residual claim, and (f) who has the right to sell his central contractual residual status".[1028]

This 1972 analysis reflected the regulation of partnerships, traditional common law, or the state of company law scholarship in the eighteenth century. According to Bratton, "[t]he new economic theory confirms and repeats legal history when it asserts that the corporation 'is contract.'"[1029] The premiss that shareholders are residual claimants was misleading or wrong, because company law shareholders can be described as residual claimants only when the company is wound up, and cannot be described as residual claimants in any meaningful sense during the life of the company.[1030]

1024 Eisenberg MA (1969) p 5.
1025 *Ibid.*, p 7.
1026 *Ibid.*, p 15.
1027 Jacobs JB (2015) pp 141–142.
1028 Alchian AA, Demsetz H (1972) p 783.
1029 Bratton WW (1989) p 1513.
1030 Stout LA (2002b) p 1193.

Nineteenth-century company law scholarship had produced the existence of the limited-liability company as a legal entity distinct from its shareholders as well as the separation of share ownership, monitoring, and management. The 1972 theory did not describe the corporations of the twentieth century and made no sense from a company law perspective.[1031]

The watershed year of the neoclassical theory was 1976, when Jensen and Meckling's analysis of the firm appeared.[1032] Jensen and Meckling defined shareholders as the principal and managers as agents. According to Jensen and Meckling, shareholders' agency costs can be reduced by aligning the interests of managers with shareholder interests. In particular, agency costs can be reduced by allocating more and more shares to managers and more and more power to shareholders.[1033]

Unlike the human beings of Dodd (see above), the managers of Jensen and Meckling can be regarded as sociopaths influenced by their own personal financial incentives only.

In the light of the fact that societal theories can be self-fulfilling, the societal downside with the adoption of a theory that says that firms really do not exist and that good managers are sociopaths is that you end up with firms that are in a self-destruct mode. Generally, neoclassical economic theory made it more legitimate for short-term shareholders and managers to loot companies for their own short-term profit.

The theory was nevertheless adopted in much of company law scholarship. Easterbrook and Fischel argued that corporations are enduring relational contracts, equity investors are holders of residual claims, and managers are agents of equity investors.[1034] A contractarian consensus emerged in American corporate law[1035] and by necessity limited the notion of corporate law.[1036]

1031 See also *ibid.*, p 1191.

1032 Jensen MC, Meckling WH (1976). See Bratton WW (1989) pp 1476 – 1477.

1033 For a critical summary of the use of the principal-agent theory, see Batt R, Appelbaum E (2013).

1034 Easterbrook FH, Fischel DR (1991) pp 90 – 91.

1035 Kitch EW (2005) p 35: "The goals of corporate law are much easier to describe today than they were even twenty and certainly a hundred years ago. Corporate law has come to be understood as a system of multi-party contractual relationships, a subpart of contract law. Corporate law provides default rules that can be varied by the parties. The law is concerned with implementing the agreement that the parties have made. Purchasers of securities issued by corporations are presumed to be bound by the terms of the securities they have purchased, even if those terms are exceedingly complex and technical. The law has shifted from a concept of mandatory corporate norms to a concept of a set of organizational options."

The American Law Institute's Principles of Corporate Governance provide the neoclassical definition of the goal of the corporation in § 2.01 (a): "a corporation should have as its objective the conduct of business activities with a view to enhancing corporate profit and shareholder gain".[1037] The SEC regarded shareholders as "owners" and "capital providers".[1038] In reality, retail investors provide capital to financial intermediaries that manage other people's money, shareholders are neither the largest nor the most important source of public company funding, and public companies distribute more money to shareholders than they raise from shareholders.[1039]

The new narrative influenced the way many looked at corporate governance: "Broadly speaking the history of corporate law is the history of a hierarchical model of the internal organization of the firm. According to this perspective, power and authority flow 'downwards' from the legal (and moral) 'owners' of the corporation (the shareholders) to the board and them to the managers and (finally) to the employees. Conversely, accountability flows in the opposite direction."[1040] Actually, this narrative reflected just part of company law history. It reflected the member corporation rather than the property corporation, Lehmann's corporation model rather than his association model, and eighteenth-century English common law rather than continental European company law of the late nineteenth and early twentieth century (section 2.4.4).

The adoption of the neoclassical theory in corporate governance went hand in hand with overreliance on financial incentives and increasing CEO pay. Obviously, if financial incentives are regarded as the only incentives that matter, CEOs

1036 *Ibid.*, p 38: "The emergence of a contractarian consensus in corporate law has simplified the field. At the same time, it has reduced the importance of the field, for the consensus of necessity concedes that public policy questions such as concentration of power, structure of the tax system, employer-employee relations, and organization of the securities markets are appropriate subjects for the law to address. The only claim of the contractarian consensus is that those subjects should be addressed in other fields of law, not as part of the law governing the internal structure of the firm. As a result, the field of corporate law has lost some of its importance."
1037 See Hopt KJ (2019a) III.1(c).
1038 Aguilar LA (2013): "Now, I would like to go beyond the investors' essential role as capital providers and focus on their rights as owners of public companies. As owners, public company shareholders have a vital role to play in corporate governance, and they have important rights under federal and state law. In particular, among other rights, shareholders have the right to vote for the election of directors and other significant matters and to make their views known to the company's management and directors on various issues affecting the corporation and its security holders—including the compensation of the company's most highly-paid executives and matters of significant social policy."
1039 Doidge C, Kahle KM, Karolyi GA (2018) pp 9 and 13.
1040 Callison W, Fenwick M, McCahery JA, Vermeulen EPM (2018) p 739.

end up being paid way too much in the light of the fact that human beings even react to other incentives.[1041] Short-term incentives persist largely because they serve executives' private interests.[1042]

Firms that focus on allocating money to shareholders and top executives in the short term cannot be competitive in the long term. This could be expected to make firms worse especially in industries that require long-term investment. In fact, the share of US manufacturing has declined and was just 11% of the GDP in 2017.[1043] The financial business model and the perceived short-term benefits of outsourcing made US companies outsource manufacturing especially to low-cost countries.[1044] Many traditional American firms seek profits through concentration and high entry barriers. US stock markets are now dominated by big tech firms that chose a different narrative and a different business model.

This said, there have been some legislative attempts to make it possible for board members to take a more holistic approach to business. § 2.01 (b) of the American Law Institute's Principles of Corporate Governance permits taking into account "ethical considerations that are reasonably regarded as appropriate to the responsible conduct of business".[1045] The Business Corporation Law of Pennsylvania lays down a general rule for the exercise of powers and permits directors to consider "pertinent factors".[1046] Directors "shall not be required, in considering the best interests of the corporation or the effects of any action, to regard any corporate interest or the interests of any particular group affected by such action as a dominant or controlling interest or factor".[1047] Moreover, the consideration of interests and factors in this manner does not constitute a

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1041 See Simon HA (1991) p 30 on the existence of various kinds of manager incentives. For the current critical sentiment, see The Economist, Pay guaranteed, performance optional, 11 July 2020; Willman P, Pepper A (2020).

1042 Bebchuk LA (2021).

1043 Manufacturing, value added (% of GDP), World Bank.

1044 Porter M, Rivkin JW (2012): "The very nature of location decisions may lead some companies to move more high-end activities out of the United States, or locate fewer new activities in the U.S., than would maximize firm value … Many benefits of locating elsewhere, such as low wages or taxes, are visible and immediate, whereas the drawbacks are frequently subtle and apparent only over the long term … One of the primary reasons that location choices may turn out to be less effective than expected is because managers sometimes overlook the current and future hidden costs associated with operating outside the United States … Sophisticated business leaders understand that a company can benefit by building local clusters and upgrading the business environment."

1045 See Hopt KJ (2019a) III.1(c).

1046 15 Pa. Cons. Stat. § 515(a).

1047 15 Pa. Cons. Stat. § 515(b).

breach of duty of care.[1048] The business judgment rule applies even in this case.[1049] There are similar rules in the New York Business Corporation Act.[1050] Neither the Delaware General Corporation Law nor the Model Business Corporation Act contain such rules.[1051]

One could say that such legislation is not necessary because of the business judgment rule. For example, this was pointed out by Martin Lipton: "[T]he controlling legal rule is universal and rock-solid: in every US jurisdiction, boards are allowed to use their 'business judgment' to pursue ESG principles for the purpose of creating long-term corporate value. That is just the floor. Properly informed directors are also empowered to protect corporate reputations and engage with investors about long-term threats from social and environmental issues. Directors may also safeguard global supply chains and strengthen the ability to recruit and motivate a skilled workforce. Moreover, boards have the affirmative duty to identify business risks and come up with a strategy for dealing with them. Taken together, directors' duties not only permit boards to address the full range of risks that threaten a company's ability to deliver sustainable growth, but indeed require boards to address them."[1052]

The benefit corporation has emerged as a new corporate entity in the US. Rather than simply allowing management to take into account not only shareholder value maximisation but even other considerations, a benefit corporation requires management to take into account particular considerations. In effect, this means a binding CSR mission. The benefit corporation is thus intended as a company form for for-profit social enterprises. In 2010, Maryland became the first state to enact benefit corporation legislation. Most states including Delaware and the District of Columbia have followed suit.[1053] However, the benefit corporation is rather marginal compared with the standard corporation.

Business Roundtable Statement on the Purpose of a Corporation. Business Roundtable is an association of chief executive officers of America's leading

1048 15 Pa. Cons. Stat. § 515(b).

1049 15 Pa. Cons. Stat. § 515(d).

1050 Section 717(b) of New York Business Corporation Law.

1051 See also Fleischer H (2018a) pp 10 – 11.

1052 Martin Lipton, Opinion. Corporate governance. Directors have a duty to look beyond their shareholders. Financial Times, 6 December 2018. See already Stout LA (2012) p 32; Macey JR (2013) pp 912 – 913.

1053 Cummings B (2012); Hart O, Zingales L (2017) p 260. In 2015, Italy introduced the so-called Società Benefit. Law No. 208 of 28 December 2015, article 1, subsections 376 – 382.

companies. It has represented powerful interests in the US.[1054] In 1997, it endorsed shareholder primacy: "The Business Roundtable wishes to emphasize that the principal objective of a business enterprise is to generate economic returns to its owners."[1055] However, the mood changed.[1056]

In 1999, professors Blair and Stout pointed out that directors are not agents of shareholders in the legal sense. Rather, they are "trustees for the corporation itself – mediating hierarchs whose job is to balance team members' competing interests in a fashion that keeps everyone happy enough that the productive coalition stays together".[1057] Boards therefore exist "to protect the enterprise-specific investments of all the members of the corporate 'team,' including shareholders, managers, rank and file employees, and possibly other groups, such as creditors".[1058] According to Blair and Stout, this applies to public corporations only: "the typical private corporation adheres more closely to the grand-design principal-agent model of the firm than to the mediating hierarchy model".[1059] The two professors seem to use the notions of the "firm" and "corporation" interchangeably.[1060] In any case, they argue that "American law in fact grants directors tremendous discretion to sacrifice shareholders' interests in favor of management, employees, and creditors, in deciding what is best for 'the firm.'"[1061]

In 2009, Jack Welch, the charismatic former CEO of GE, described shareholder value as "the dumbest idea in the world".[1062] In 2019, JPMorgan's Jamie Dimon used a 50-page letter to shareholders to analyse the shortcomings of unbridled capitalism, praising Europe's tradition of social democracy.[1063] Levi Strauss, a clothing firm, told investors that it would manage its business for the long

1054 Reich RB (2015) p 92: "[S]tarting in the early 1980s, large corporations and their top executives, major actors on Wall Street, and other wealthy individuals have exercised disproportionate and increasing influence over how the market is organized."

1055 The Business Roundtable, Statement on Corporate Governance (September 1997).

1056 See, for example, Foroohar R (2016); Michael Skapinger, Opinion Capitalism. The shareholder-first corporate model erodes public support. Investors ready to disrupt far-sighted strategies for short-term gain have ruined trust. Financial Times, 6 March 2017.

1057 Blair MM, Stout LA (1999) pp 280 – 281.

1058 *Ibid.*, p 253. See even Basel Committee on Banking Supervision (2015) paragraph 2.

1059 Blair MM, Stout LA (1999) p 281.

1060 See *ibid.*, pp 293 – 294.

1061 *Ibid.*, p 291.

1062 Francesco Guerrera, Welch condemns share price focus. Financial Times, 12 March 2009.

1063 Jamie Dimon, Chairman and Chief Executive Officer, JPMorgan Chase, Letter to Shareholders, 4 April 2019, p 45; Editorial board, Dimon and Dalio capture the spirit of capitalist reform. Financial Times, 9 April 2019.

term, did not need short-term shareholders, and would not provide quarterly earnings forecasts.[1064]

Shareholder primacy came to be seen as the cause of various problems and a threat to capitalism. Wachtell, Lipton, Rosen & Katz, a law firm, summed up the problems as follows: "Capitalism is at an inflection point. For the past 50 years, corporate law and policy has been misguided by Nobel Laureate Milton Friedman's ex-cathedra doctrinal announcement that the sole purpose of business is to maximize profits for shareholders. Corporations have also been faced with technological disruption, globalization and the rise of China, capital markets dominated by short-term trading and focused on quarterly profits, and unrelenting attacks and threats by activist hedge funds. In response to these pressures, corporations focused primarily on increasing shareholder wealth in the short-term, at the expense of employees, customers, suppliers, long-term value and the local and national communities in which they operate. The prioritization of the wealth of shareholders at the expense of employee wages and retirement benefits, with a concomitant loss of the Horatio Alger dream, gave rise to the deepening inequality and populism that today threaten capitalism from both the left and the right."[1065]

The changing mood was reflected in new ideas about the corporate purpose such as "The New Paradigm" of Wachtell, Lipton, Rosen & Katz,[1066] Senator Elizabeth Warren's 2018 proposal for federal legislation, and Leo Strine's new deal for corporate America with better focus on employees' interests in "Fair and Sustainable Capitalism".[1067] The New Paradigm is "a roadmap for an implicit corporate governance and stewardship partnership between corporations and investors and asset managers to achieve sustainable long-term investment and growth". It "rejects shareholder primacy and is instead premised on the idea that stakeholder governance and ESG are in the best interests of shareholders".[1068] The New Paradigm is less intrusive than proposals by Senator Warren.[1069] Senator Warren's Accountable Capitalism Act[1070] would have created the "United States Corporation" as a federal company form for large corporations

1064 Andrew Edgecliffe-Johnson, Levi Strauss bets morel mission can survive public markets. Financial Times, 10 October 2019.
1065 Lipton M, Rosenblum SA, Cain KL, Niles SV, Blackett AS, Iannone KC (2019).
1066 *Ibid.*; Lipton M (2019).
1067 Strine LE Jr (2019).
1068 Lipton M, Rosenblum SA, Cain KL, Niles SV, Blackett AS, Iannone KC (2019).
1069 See also Martin Lipton, Opinion. Corporate governance. Directors have a duty to look beyond their shareholders. Financial Times, 6 December 2018.
1070 S.3348 – 115th Congress (2017–2018).

and establish an "Office of United States Corporations" to grant charters and monitor compliance with the Act's requirements.[1071] The Act would have required US Corporations to have the purpose of "creating a general public benefit".[1072] Directors would have been made to consider many interests.[1073] The business judgment rule would have been aligned with the interests of the corporation[1074] (although one may ask whether this is not already the case).[1075] Moreover, Warren's Accountable Capitalism Act would have required no less than 2/5 of the directors of a US Corporation to be elected by employees.[1076]

The proposals seem to have included some elements from German company law. The proposals indicate that US corporate governance discourse partly is gravitating towards German company law.

The changing mood and rising political activism were noted by American CEOs.[1077] In August 2019, Business Roundtable rejected shareholder primacy in its Statement on the Purpose of a Corporation.[1078] Business Roundtable highlighted the importance of "businesses".[1079] Shareholders were regarded as just one of many stakeholder groups. The Statement defined the purpose of a corporation as follows:

"While each of our individual companies serves its own corporate purpose, we share a fundamental commitment to all of our stakeholders. We commit to:

1071 Section 3 of the Accountable Capitalism Act.

1072 Section 5(b)(2) of the Accountable Capitalism Act.

1073 Section 5(c)(1) of the Accountable Capitalism Act.

1074 Section 5(c)(5) of the Accountable Capitalism Act.

1075 Blair MM, Stout LA (1999) pp 300 – 301: "Most importantly, however, the business judgment rule also requires directors to demonstrate that they honestly believed they were acting in the best interests of 'the company.' It is this … that most clearly suggests that American law views the corporation as an entity with interests of its own, and not just a proxy for shareholders' interests. This is because case law generally interprets the 'best interest of the company' to include nonshareholder interests, including those of employees, creditors, and the community."

1076 Section 6(b)(1) of the Accountable Capitalism Act.

1077 Andrew Edgecliffe-Johnson, Why American CEOs are worried about capitalism. Financial Times, 22 April 2019.

1078 Business Roundtable, Statement on the Purpose of a Corporation, August 19, 2019.

1079 *Ibid.:* "Businesses play a vital role in the economy by creating jobs, fostering innovation and providing essential goods and services. Businesses make and sell consumer products; manufacture equipment and vehicles; support the national defense; grow and produce food; provide health care; generate and deliver energy; and offer financial, communications and other services that underpin economic growth."

- Delivering value to our customers. We will further the tradition of American companies leading the way in meeting or exceeding customer expectations.
- Investing in our employees. This starts with compensating them fairly and providing important benefits. It also includes supporting them through training and education that help develop new skills for a rapidly changing world. We foster diversity and inclusion, dignity and respect.
- Dealing fairly and ethically with our suppliers. We are dedicated to serving as good partners to the other companies, large and small, that help us meet our missions.
- Supporting the communities in which we work. We respect the people in our communities and protect the environment by embracing sustainable practices across our businesses.
- Generating long-term value for shareholders, who provide the capital that allows companies to invest, grow and innovate. We are committed to transparency and effective engagement with shareholders.

Each of our stakeholders is essential. We commit to deliver value to all of them, for the future success of our companies, our communities and our country."

While the Statement was necessary in the light of the changing mood, its contents are problematic. The first problem relates to stakeholderism. Shareholders were regarded as a category of stakeholders. Business Roundtable left open what or whose interests shall prevail. Stakeholderism fails to give managers guidance.[1080] Distinguishing between the legal entity and the firm could have helped. The second problem relates to the function of shareholders. Business Roundtable did not recognise the fact that shareholders are not a source of net funding for public companies.[1081] Shareholders are a source of funding mainly for start-ups and growth firms (sections 5.2 and 5.3). Distinguishing between shareholders' functions as a source of cash and providers of ancillary services could have helped. To see shareholders' functions, it would nevertheless have been necessary to replace shareholders as the principal of the mainstream principal-agent theory with the firm as the principal.

The Long-Term Stock Exchange (LTSE). On 10 May 2019, the SEC authorised Long-Term Stock Exchange, Inc., a Delaware company, to operate a fully auto-

1080 Mäntysaari P (2012) pp 85 – 90. Critically against stakeholderism even Bebchuk LA, Tallarita R (2020).

1081 Mayer C (1990) p 310; Mayer C (1998); Holmström B (2015) p 7; Mishkin FS, Eakins SG (2012) p 64; Doidge C, Kahle KM, Karolyi GA (2018) pp 9 and 13.

mated electronic platform for the buying and selling of shares. The Long-Term Stock Exchange (LTSE) was approved as a national securities exchange.[1082]

LTSE is marketed as "the only U.S. stock exchange with a mission to help companies create lasting businesses and empower long term-focused investors". In the marketing of the exchange, the stated intention of LTSE is to "enable companies to prioritize the long term". This will be achieved by listing rules: "[W]hen companies list with the exchange to sell shares to the public, they will adopt a set of governing practices that mirror their long-term horizon."[1083]

There is relatively little room for innovation because of the mandatory legal framework for national securities exchanges.[1084] In any case, LTSE's listing standards are intended to foster long-term value creation. LTSE wants to apply in its listing standards particular principles for this purpose.[1085]

On 26 June 2019, LTSE proposed enhanced listing standards in its application to the SEC.[1086] They were summed up by the SEC as follows:

"The proposed rules are based on the belief that transparency of information relevant to long-term value creation will be valued by both investors and companies. As a result, the proposed rules would require LTSE-Listed Issuers to adopt and publish policies that are consistent with the following long-term principles ...:

- Long-term focused companies should consider a broader group of stakeholders and the critical role they play in one another's success;
- Long-term focused companies should measure success in years and decades and prioritize long-term decision-making;
- Long-term focused companies should align executive compensation and board compensation with long-term performance;
- Boards of directors of long-term focused companies should be engaged in and have explicit oversight of long-term strategy; and
- Long-term focused companies should engage with their long-term shareholders.

LTSE believes that the Principles help to identify what policies are most relevant to long-term value creation."

1082 SEC Release No. 34–85828 (May 10, 2019).

1083 The website of LTSE, Frequently asked questions.

1084 See SEC Release No. 34–85828 (May 10, 2019).

1085 LTSE, The Long-Term Stock Exchange proposes enhanced listing standards for a new generation of public companies. New York, 26 June 2019.

1086 SEC Release No. 34–86327 (July 8, 2019).

LTSE motivated these principles by the bad societal outcomes of short-termism,[1087] by the interests of issuers and shareholders that prefer a long-term view,[1088] and by regulatory compliance.[1089] The proposed rules would require LTSE-listed issuers to adopt and publish policies that are consistent with the LTSE's long-term principles, namely a Long-Term Stakeholder Policy, a Long-Term Strategy Policy, a Long-Term Compensation Policy, a Long-Term Board Policy, and a Long-Term Investor Policy:[1090]

– A Long-Term Strategy Policy means that the company measures success in years and decades and prioritizes long-term decision-making. "The Long-Term Strategy Policy must define the LTSE-Listed Issuer's long-term time horizon, and include a discussion of how this time horizon relates to the LTSE-Listed Issuer's strategic plans, how the LTSE-Listed Issuer aligns success metrics with that horizon, and how it implements long-term prioritization throughout the organization."[1091]
– A Long-Term Board Policy means that the board should be engaged in and have explicit oversight of long-term strategy. The board "should be engaged with the LTSE-Listed Issuer's forward-looking, long-term strategy, rather than serving primarily an audit function and looking backwards, as many boards seem to today".[1092]
– A Long-Term Investor Policy means that companies should engage with their long-term shareholders. Each LTSE-listed issuer must "adopt and publish a

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1087 *Ibid.*, I.1: "Many academics, commentators, market participants, as well as current members of the Commission have voiced concerns regarding 'short- termism' and the risk that some investors' focus on short-term results could put pressure on companies to sacrifice long-term value creation in order to reach quarterly or other short-term expectations. In addition, some commenters believe that short-term pressures placed on companies have discouraged some newer companies from conducting initial public offerings and have led some public companies to go private. Indeed, even when companies do undertake initial public offerings, in recent years, many have sought to do so in a way that limits the public market's short-term pressures, by going public much later in their lifecycle or retaining for the founders much of the voting control."
1088 *Ibid.*, I.1: "[T]he Exchange believes that the proposed rules will begin to introduce a differentiated choice for issuers and investors that prefer listing standards explicitly designed to promote long-term focus and value creation."
1089 *Ibid.*, I.2: "The Exchange believes that the proposed rule change is consistent with Section 6 of the Act in general, and further the objectives of Section 6(b)(5) of the Act, in particular …"
1090 *Ibid.*, I.1.
1091 *Ibid.*, I.1(B).
1092 *Ibid.*, I.1(D).

policy explaining how the LTSE-Listed Issuer engages with long-term investors".[1093]

– A Long-Term Stakeholder Policy means that "companies should consider a broader group of stakeholders and the critical role they play in one another's success". Each LTSE-listed issuer is required to "adopt and publish a Long-Term Stakeholder policy explaining how the issuer operates its business to consider all of the stakeholders critical to its long-term success". According to LTSE, "effective long-term planning is enhanced when companies consider their impact on various stakeholders and the sustainability of their business, and that long-term investors generally value such information".[1094]

Both Business Roundtable and LTSE seem to want to focus more on long-termism. Both want to take into account stakeholders. In both cases, one may nevertheless ask what or whose interests shall prevail.

BlackRock, index funds and ESGs. The concentration of institutional share ownership means that institutional shareholders can use their legal or de facto powers in many ways. In practice, some institutional shareholders have taken into account stakeholder interests. They may do this for their own marketing purposes, for their own strategic long-term interests, or for short-term tactical reasons. This practice is not limited to worker pension funds.[1095] For example, BlackRock is now addressing climate change by asking companies to disclose a plan for how their business model will be compatible with a net-zero economy. A large index fund, BlackRock is a top three shareholder in the vast majority of US public companies. Traditional financially-driven activist hedge funds therefore have incentives to incorporate ESG principles into their own programmes in order to get the support of large index funds in opportunistic voting situations.[1096]

The interests of Netflix. There is a fundamental difference between the Wall Street business model and the Silicon Valley business model. To survive in digital economy, a young firm needs to invest in technology and fast growth. Shareholder primacy does not describe the business model of technology start-ups.

Netflix is a very successful company in digital economy. It is also an example of a firm that seems to have replaced both shareholder primacy and the stakeholder approach by creating a company culture based on documented and pub-

1093 *Ibid.*, I.1(E).
1094 *Ibid.*, I.1(A).
1095 Webber D (2018).
1096 Mathew S, Wolf D, Jebejian S (2021); The Economist, Schumpeter. The long squeeze, 6 February 2021.

lished principles that seek to foster the interests of the firm Netflix. Much has already been written about the culture of Netflix.[1097]

Netflix has described the core of its culture in as follows: “What is special about Netflix ... is how much we: 1. encourage independent decision-making by employees; 2. share information openly, broadly, and deliberately; 3. are extraordinarily candid with each other; 4. keep only our highly effective people; 5. avoid rules.”[1098] It is thus a principles-based culture backed up by the termination of average performers.

Netflix Culture consists of many principles, many of which relate to acting in the best interest of Netflix. It is expressed in the following ways in Netflix Culture: “We trust our teams to do what they think is best for Netflix—giving them lots of freedom, power, and information in support of their decisions. In turn, this generates a sense of responsibility and self-discipline that drives us to do great work that benefits the company.” “You care intensely about our members and Netflix’s success.” “You seek what is best for Netflix, rather than what is best for yourself or your group.” “You say what you think, when it’s in the best interest of Netflix, even if it is uncomfortable.” “You make decisions based on the long term, not near term.” “Our policy for travel, entertainment, gifts, and other expenses is 5 words long: ‘act in Netflix’s best interest.’”

Conclusion on US law. There are three striking aspects of US company law as regards the interests of the company.

The first is the absence of the distinction between the notions of the legal entity and the firm (das Unternehmen, l’entreprise). The absence of the notion of the firm means that board members cannot have a duty to act in the interests of the firm (Unternehmensinteresse, l’intérêt social).

The second is the existence of a functional equivalent to a duty to act in the interests of the firm in the past. The functional equivalent consisted of the irrevocable nature of the corporate charter (*Dartmouth College*), the practice of vesting all powers in the board, dispersed share ownership, and a culture that favoured the managerial business model. In effect, the interests of the firm were protected until the 1970s.

The absence of a legal duty to act in the interests of the firm nevertheless means that the protection of the board and the management function is structurally weak. It was relatively easy for institutional investors to replace the earlier narrative with shareholder primacy starting in the 1970s. When the problems of shareholder primacy mounted, the absence of the distinction between the no-

1097 Hastings R, Meyer E (2020); The Economist, The Hastings doctrine, 12 September 2020.
1098 Netflix Culture, Netflix website 2021.

tions of the legal entity and the firm meant that shareholder primacy was complemented by a stakeholder approach. But stakeholderism fails to say what or whose interests shall prevail when there are conflicting interests.

The third striking aspect is the existence of two forms of capitalism in the US. Shareholder primacy and the stakeholder approach belong to Wall Street capitalism. In Silicon Valley digital economy built on positive network effects, shareholder primacy would not work, since firms must invest in technology and seek high growth in order to survive. The interests of the firm are paramount in this culture. The Silicon Valley model is partly made possible by the flexibility of the business judgment rule.

English law. The roots of US company law can be traced to English common law. While the period following the Second World War was a golden era for American corporations, for English companies it was a period of stagnation and decline.

British economy was in very bad shape in the 1970s before Margaret Thatcher became Prime Minister. English common law and English business culture probably contributed to the problems.

English common law judgments have focused on the duty of directors to act in the best interests of the company. The duty to act in the best interests of the company is a well-established fiduciary duty that stems from the cases of *Hutton v West Cork Railway*[1099] and *Re Smith and Fawcett*.[1100] In *Hutton v West Cork Railway*, Bowen LJ famously said: "The law does not say that there shall be no cakes and ale, but there are to be no cakes and ale except as such as are required for the benefit of the company." In *Re Smith and Fawcett*, Lord Greene MR observed that "directors must act, bona fide, in what they consider – not what the court considers – is in the best interests of the company".

The existence of a duty to act in "the best interests of the company" does not say anything about the contents of the best interests of the company. Since the company is regarded as a legal fiction and the notion of the firm (such as the notion of das Unternehmen or l'entreprise) does not exist in English company law, there really is just one thing to equate the interests of the company with. The courts have equated the interests of the company with the interests of shareholders.

In *Greenhalgh v Ardene Cinemas*,[1101] Lord Evershed MR said: "[T]he phrase 'the company as a whole' does not mean the company as a commercial entity

1099 Hutton v West Cork Railway (1883) 23 Ch D 654.
1100 Re Smith and Fawcett Ltd. [1924] Ch 304.
1101 Greenhalgh v Ardene Cinemas Ltd [1950] 2 All ER 1120.

as distinct from the corporators. It means the corporators as a general body." In *Brady v Brady*,[1102] Nourse LJ said: "The interests of a company, an artificial person, cannot be distinguished from the interests of the person who are interested in it. Who are those persons? Where a company is both going and solvent, first and foremost come the shareholders present and no doubt future as well."

In the light of these cases, shareholder primacy seems to reflect the traditional position of English common law.[1103]

There were nevertheless cases in which shareholder primacy was questioned and directors were assumed to have a duty to do things that made business sense for the company. In *Scottish Co-operative Wholesale Society Ltd v Meyer*,[1104] Lord Denning said that the duty of a company's directors "was to do their best to promote its business and to act with complete good faith towards it".

After the accession of the UK to the European Communities (EC) in 1973, the UK had a duty to implement European company law directives. The UK thus had to adopt the legal capital regime that was and still is the cornerstone of European company law.[1105]

The legal capital regime reflected continental European company law as it allocated powers between different corporate bodies. It gave shareholders the right to vote on many important issues relating to shares but was balanced by the strict separation of functions between the general meeting and the board. In Germany and France, it was also balanced by the interests of the firm (das Unternehmen, l'entreprise).

In English company law culture, increased shareholder rights imported from continental Europe may have made the problems worse.[1106] The marriage of common law, EU law, and UK corporate governance practices facilitated the financialisation of British economy and may have contributed to the decline of the share of British manufacturing to 9% of GDP (2018).[1107]

1102 Brady v Brady [1988] 3 BCC 535.

1103 Kahn-Freund O (1944) pp 55–56 on lifting the veil; Quinn J (2015): "However despite these cases often being cited a support for shareholder value, the duty to act in the best interests of the company, by itself, does not support shareholder value. It is the courts, by interpreting this duty to mean the interests of the shareholders, which impose a shareholder value approach."

1104 Scottish Co-operative Wholesale Society Ltd v Meyer [1959] AC 324.

1105 For the legal capital regime, see Mäntysaari P (2010c) sections 5.3 and 5.4. In EU company law, it was originally based on Directive 77/91/EEC (Second Company Law Directive) and is now based on Directive (EU) 2017/1132 (Directive relating to certain aspects of company law). See also Bebchuk LA (2005).

1106 For shareholders' rights in England and the US, see Bebchuk LA (2005).

1107 Manufacturing, value added (% of GDP), World Bank national accounts data.

This said, the understanding seems to be that the earlier theoretical separation between shareholders and debenture-holders with shareholders as owners and debenture-holders as non-owners has collapsed in contemporary economic reality.[1108]

In the company law reform of 2006, it was deemed necessary to mitigate the effects of shareholder primacy. Section 172(1) of the Companies Act 2006 laid down a new "duty to promote the success of the company" as follows: "A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to—(a) the likely consequences of any decision in the long term, (b) the interests of the company's employees, (c) the need to foster the company's business relationships with suppliers, customers and others, (d) the impact of the company's operations on the community and the environment, (e) the desirability of the company maintaining a reputation for high standards of business conduct, and (f) the need to act fairly as between members of the company." The rather ambiguous section 172(2) of the Companies Act 2006 raised the question whether a company has other purposes than the benefit of shareholders: "Where or to the extent that the purposes of the company consist of or include purposes other than the benefit of its members, subsection (1) has effect as if the reference to promoting the success of the company for the benefit of its members were to achieving those purposes."[1109] Section of 171 of the Companies Act 2006 codified the traditional position of common law: "A director of a company must (a) act in accordance with the company's constitution, and (b) only exercise powers for the purposes for which they are conferred."

This has been described "a middle way" and an "enlightened shareholder approach", that is, "a shareholder orientation that also looks at the interests of other stakeholders in view of preserving a long-term profitability of the firm".[1110]

In November 2018, the British Academy published an initial report on the Future of the Corporation. The report suggested that a reformulation of the corporate purpose should be pursued, one that is "not solely about profit, but about public purposes that relate to the firm's wider contribution to public interests and societal goals".[1111] In 2019, the British Academy proposed eight "principles

1108 See Ireland P (1999); Ireland P (2018) referring to Gower and Davies.
1109 See Keay AR (2011).
1110 Hopt KJ (2021) p 21.
1111 See British Academy (2019) p 10.

for purposeful business".[1112] The first of them relates to corporate purpose: "Corporate law should place purpose at the heart of the corporation and require directors to state their purposes and demonstrate commitment to them."[1113] The report nevertheless points out that this is already permitted by sub-section (2) of section 172 of the UK Companies Act. The fourth principle relates to corporate governance: "Corporate governance should align managerial interests with companies' purposes and establish accountability to a range of stakeholders through appropriate board structures. They should determine a set of values necessary to deliver purpose, embedded in their company culture."[1114]

However, one may assume that the failure to distinguish between the legal entity (the company) and the firm (the business organisation) will not improve firms. According to our theory, companies are mere tools used by firms. The complex interests of the firm are not limited to a company's stated purposes.

At the end of the day, the priorities of English company and securities law were summed up in The Kay Review of 2012 that stated laconically: "Equity markets today should primarily be seen as a means of getting money out of companies rather than a means of putting it in."[1115] This was later recognised as a problem in the UK.[1116]

The Shareholder Rights Directive v "Sustainable Corporate Governance". In the EU, the Shareholder Rights Directive[1117] of 2017 (SRD II) and legislative action on "sustainable corporate governance" that the European Commission started to consider in 2019–2020[1118] reflect not only a conflict between the shareholder approach and the stakeholder approach but even a failure to understand the notion of the firm (das Unternehmen, l'entreprise) and the firm's own interests (Unter-

1112 *Ibid.*, p 8.
1113 *Ibid.*, p 20.
1114 *Ibid.*, p 23.
1115 The Kay Review (2012) paragraph 2.32. See nevertheless Roe M, Spamann H, Fried J, Wang C (2021) p 140: "[D]uring 1992–2019, EU companies distributed € 2.5 trillion in dividends and € 676 billion via stock buybacks (a total of about € 3.2 trillion in shareholder payouts), or 58% of these companies' total net income. But during the same period, EU listed companies issued € 2.5 trillion of new equity, moving cash from shareholders directly or indirectly back to these firms."
1116 Hill J (2021) p 1: "A vital part of the whole financial ecosystem is the process by which companies raise capital on the markets, including by going public. We need to encourage more of the growth companies of the future to list here in the UK."
1117 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.
1118 Ernst & Young (2020); European Commission, Sustainable corporate governance. Inception impact assessment. Ref. Ares(2020)4034032–30/07/2020.

nehmensinteresse, l'intérêt social). In this way, they partly reflect the failings of US and UK company law and corporate governance scholarship rather than the history of continental European scholarship. The fact that there were just a few years between these two legislative projects that represent opposite approaches to corporate governance indicate that the Europan Commission lacks a key design principle for company law, that there is something wrong with the discourse, and that there are legal irritants and theory irritants. We can have a brief look at these two legislative projects.

The Shareholder Rights Directive. The Shareholder Rights Directive of 2017 (SRD II) reflects the standard financial model of corporate governance under the agency theory and is based on the regulatory tradition of common law countries. SRD II relies on transparency (section 2.4.7),[1119] monitoring by shareholders,[1120] financial incentives, and the alignment of interests with financial incentives.[1121]

In continental Europe, provisions implementing SRD II can become legal irritants[1122] that are difficult to align with the distribution of powers between different company bodies. For example, the German Corporate Governance Code 2020 redefines the standards for management board remuneration as well as the independence requirement for shareholder representatives on the supervisory board. The Code was amended to align it with the Act for Implementing the Second EU Shareholder Rights Directive ("ARUG II"). ARUG II and the new Code mix the powers of the supervisory board and the general meeting[1123] and seek to replace the structural independence of the monitoring function with the personal "independence" of supervisory board members.[1124]

"Sustainable Corporate Governance" in the EU. The 2020 report on "sustainable corporate governance" was prepared by Ernst & Young (EY).[1125] It was commissioned by the European Commission due to policy choices in the European Green Deal. The Communication on the European Green Deal briefly mentioned that "sustainability should be further embedded into the corporate governance framework, as many companies still focus too much on short-term financial

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1119 Recital 34 of Directive 2017/828/EU (SRD II).

1120 Recitals 9, 15, 29 and 31 of Directive 2017/828/EU (SRD II).

1121 Recitals 28 and 29 of Directive 2017/828/EU (SRD II).

1122 For legal transplants and irritants, see Watson A (1974); Teubner G (1998).

1123 § 87a AktG and § 120a AktG. See also the German Corporate Governance Code 2020, Grundsatz 23.

1124 German Corporate Governance Code 2020, Empfehlungen, C.7: "Mehr als die Hälfte der Anteilseignervertreter soll unabhängig von der Gesellschaft und vom Vorstand sein."

1125 Ernst & Young (2020).

performance compared to their long-term development and sustainability aspects".[1126] The report prepared by EY reflects not only the societal and environmental policy objective already chosen by the European Commission but even theory irritants (see below).[1127] The report was based on theoretical and value-based assumptions, identified "key problem drivers", and recommended policy intervention.

The report was based on the theoretical assumption that there are two approaches to corporate governance, namely shareholder primacy (or monism) and the stakeholder approach (or pluralism).[1128] According to the report, the interpretation of the interests of the company and directors' duties play a central role. The "position that has come to prevail in corporate governance practice is the one supporting the 'shareholder primacy' norm."[1129]

The report identified the following seven "key problem drivers": "1. Directors duties and company's interest are interpreted narrowly and tend to favour the short-term maximization of shareholder value; 2. Growing pressures from investors with a short-term horizon contribute to increasing the boards' focus on short-term financial regurns to shareholders at the expense of long-term value creation; 3. Companies lack a strategic perspective over sustainability and current practices fail to effectively identify and manage relevant sustainability risks and impacts; 4. Board remuneration structures incentivize the focus on short-term shareholder value rather than long-term value creation for the company; 5. The current board composition does not fully support a shift towards sustainability; 6. Current corporate governance frameworks and practices do not sufficiently voice the long-term interests of stakeholders; 7. Enforcement of the directors' duty to act in the long-term interest of the company is limited."[1130]

According to the report, the EU should act for three main reasons. First, EU policy intervention is required to "lengthen the time horizon in corporate decision-making". Second, EU policy intervention is required to foster "corporate governance that is more conducive to sustainability". Third, EU policy intervention is required because "[c]orporate governance frameworks in Europe vary significantly between Member States, and an EU action alone seems to have the

1126 The European Green Deal. Communication from the Commission, COM/2019/640 final, section 2.2.1.

1127 For theory transplants and irritants see Mäntysaari P (2017) pp 25–27.

1128 *Ibid.*, Annex I, section 7.1.1, pp 91–92: "According to literature, pluralism relates to jurisdictions where a broader set of interests are encompassed by the notion of 'company's interest' while monism equates the interests of the company with the interests of shareholders."

1129 *Ibid.*, Annex I, section 6.2, p 89.

1130 *Ibid.*, Executive summary, p vi.

prerequisite scale and scope needed to achieve a higher degree of corporate responsibility for long-term sustainable value creation and to set a minimum common ground for dealing with sustainability while avoiding market distortions".[1131]

This led to proposals for action in the report. It was argued that "[a] possible future EU action in the area of company law and corporate governance should pursue the general objective of fostering more sustainable corporate governance and contributing to more accountability for companies' sustainable value creation."[1132] Moreover, "any future EU intervention should pursue the following three specific objectives: Strenghtening the role of directors in pursuing their company's long-term interests; ... Improving directors' accountability towards integrating sustainability into corporate decision-making; ... Promoting corporate governance practive that contribute to company sustainability ..."[1133]

The report therefore proposed stakeholder involvement in corporate decision-making,[1134] greater representation of stakeholders' interests in the boardroom,[1135] and linking the remuneration of board members to sustainability metrics.[1136]

The report that reflected the policy choices of the European Commission that had commissioned it was received favourably by the European Commission. The report was followed by an inception impact assessment.[1137] The European Commission placed the report and its own future actions in the context of SDGs, the

1131 *Ibid.*, Executive summary, p vi – vii.

1132 *Ibid.*, Executive summary, p vii.

1133 *Ibid.*

1134 *Ibid.*, Annex I, section 6.2, p 84: "Stakeholder involvement in decision-making is key to strengthen the business relationship with its workforce and the society in which it operates, and consequently to promote its long-term success to the benefit of stakeholders and shareholders alike."

1135 *Ibid.*, Annex I, section 7.1.1, p 97: "Against these developments, it is now widely recognized that there is a need to go beyond the shareholder-centricity and ensure greater representation to stakeholders' interests in the boardroom, also as a way to promote company's sustainability."

1136 *Ibid.*, Annex I, section 6.2, p 82: "Linking the remuneration of board members to sustainability metrics – such as diversity and inclusion goals, energy efficiency targets, and GhG emissions reduction target – has the potential to increase accountability, reduce the risks related to sustainability underperformance, and create incentives to meet sustainability goals and achieve resultant enefits. Moreover, it also testifies the importance that achieving greater sustainability has for a company."

1137 European Commission, Sustainable corporate governance. Inception impact assessment. Ref. Ares(2020)4034032 – 30/07/2020.

Paris Agreement, and the European Green Deal.[1138] The Commission argued that there is a connection between shareholder payouts and bad climate and societal outcomes: "Over the last two decades … indicators seem to have stabilised around high levels of pay-outs and low investment intensity … Thus, it may hamper investment crucial for the sustainability transition, into productive facilities, innovation, upgrading and employee retraining, upskilling and reskilling. It may also contribute to income inequality …"[1139]

Unsurprisingly, the report was swiftly criticised by industry[1140] and scholars. Roe and others identified major flaws in the report.[1141] The flaws included its definition of the problem, inapposite evidence, biased use of literature, and ill-considered reform proposals.[1142] The definition of the problem was flawed in particular because the report did not distinguish between the time horizon, externalities, and distributional concerns.[1143] The choice of literature was biased as the report cited few empirical studies on short-termism and the few that it did cite all found short-termism to be a problem.[1144] Moreover, the scholars argued that the report's proposals "stand on shaky foundations because their ostensible target—short-termism as inducing declining investment—may be modest or even a mirage, whereas the real problems—externalities and distribution—are not clearly articulated".[1145]

A three-day hearing by the European Corporate Governance Institute (ECGI) concluded that the report should be "disregarded" altogether.[1146] A group of scholars called on the European Commission "to redirect its far-reaching propos-

1138 *Ibid.*, Context. See also The European Green Deal. Communication from the Commission, COM/2019/640 final, section 2.2.1.

1139 Inception impact assessment, Problem the initiative aims to tackle.

1140 Jan-Olof Jacke, Lars Sandahl Sorensen, Jyri Häkämies, Ole Erik Almlid, Arto Aas and Sigurdur Hannesson. Letter: Brussels' sustainable corporate governance plan is flawed. Financial Times, 26 April 2021. The writers of the letter were Chief Executives, Nordic Confederations of Industries of Sweden, Denmark, Finland, Norway, Estonia and Iceland.

1141 Roe M, Spamann H, Fried J, Wang C (2021).

1142 *Ibid.*, pp 134 – 135.

1143 *Ibid.*, p 136.

1144 *Ibid.*, p 143: "There are dozens of empirical studies on short-termism published in economics and finance journals—we count at least 75 in economics and finance journals since 2008, with about half not finding evidence of short-termism."

1145 *Ibid.*, p 144.

1146 ECGI, Directors' Duties and Sustainable Corporate Governance. European Commission Study by Ernst & Young (EY). Online Policy Workshop, 11 – 13 November 2020.

als for sustainable corporate governance".[1147] Three things can be added to the criticism.

First, the report and the European Commission's actions indicate that the narrow distinction between shareholder primacy and the stakeholder approach and the non-recognition of the distinction between the legal entity and the firm have turned into theory irritants. To put it shortly, mainstream principal-agent theory has become a theory irritant in the advanced European company law system.[1148]

In Germany and France, it is recognised that the firm (das Unternehmen, l'entreprise) exists and has its own interests (Unternehmensinteresse, l'intérêt social). The duty to act in the interests of the company means a duty to act in the interests of the firm. Companies and other legal entities are legal tools of the firm and can easily be replaced by other legal entities with no harm done to the firm. Since the proposed changes to company law and corporate governance do not recognise the interests of firms, they could be expected to create serious externalities. In particular, they could be expected to hamper corporate decision-making, hamper competitiveness, reduce welfare, and increase distributional concerns in the long term.

Second, stakeholder-centrism, SDG-centrism, depositor-centrism, shareholder-centrism or any other narrow approach may be harmful to the firm by making it more difficult for the firm to take into account all relevant circumstances in complex markets and adapt. In contrast, recognising the interests of the firm could make it easier for the firm to include all such approaches and all circumstances to the extent that they are relevant for the firm.

Third, board members and managers are human beings influenced by societal value preferences such as sustainability. Efforts to create a particular class of directors to represent sustainability or other societal value preferences in corporate decision-making reveal a tendency to dehumanise the rest of the board and the firm's managers.[1149]

Conclusion. "The interests of the company" do not exist in nature. Whatever this notion means in company law discourse depends on the prevailing societal interests. There is a difference between continental European and US/UK company law in this respect. It is a difference of kind rather than degree. The contents of "the interests of the company" seem to be connected to the notion of the firm, the allocation of power in the company, and the share ownership structure.

1147 Call for a Redirection of EU Sustainable Corporate Governance Reform Proposals, 2021.
1148 For theory transplants and irritants, see Mäntysaari P (2017) pp 25–27.
1149 See already Dodd M (1932) p 1157.

In continental Europe, it is customary to distinguish between the firm, the legal entity, and shareholders. In France and Germany, "the interests of the company" can be interpreted as the interests of the firm (das Unternehmen, l'entreprise).

In common law countries, it is customary to distinguish between the legal entity and shareholders. Since the firm does not exist in company law discourse and the legal entity is regarded as a legal fiction, the interests that remain are the interests of shareholders. This is supported by the fact that the company is regarded as a contract between shareholders in common law jurisdictions. The alternative is a stakeholder approach. The roots of the stakeholder approach thus lie in the failure of the common law discourse to clearly distinguish between the notions of the legal entity and the firm.

In US corporate practice, corporate powers are vested in the board.[1150] Boards and professional managers had plenty of discretion to focus on the company's business thanks to the business judgment rule and the managerial business model. However, without a legal duty to act in the interests of the firm, the functional equivalent of fostering the interests of the firm suffered from a structural weakness. When institutional share ownership grew, the managerial business model was replaced by the financial business model, the agency theory, and shareholder primacy. Financial investors and managers had financial incentives to apply the agency theory and shareholder primacy.[1151] Short-termism was created internally through short-term executive incentives.[1152] After the financial crisis of 2007–2009, shareholder primacy gradually became perceived as a problem. In 2019, Business Roundtable recommended a stakeholder approach, again indicating the existence of a structural weakness in protecting management.

At the end of the day, a columnist of The Economist captured the essence of the interests of the firm of the continental European kind when discussing "the corporate purpose" pretending to be a straight-talking executive: "[T]here is a lot of talk about corporate purpose, and a lot of grandiose language tends to be used by other executives. So let me tell you the purpose of this business under my leadership. It is to create a company that provides products and services that customers are eager to buy. In turn, that depends on ensuring that our

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1150 This is still the case. See § 8.01(b) of the Model Business Corporation Act (2016 Revision) (December 9, 2016).

1151 See Bebchuk LA, Fried JM, Walker DI (2002); Bebchuk LA, Fried JM (2003); Lie E (2005); Reich RB (2015) p 92: "[S]tarting in the early 1980s, large corporations and their top executives, major actors on Wall Street, and other wealthy individuals have exercised disproportionate and increasing influence over how the market is organized."

1152 Bebchuk LA (2021).

employees are both well-rewarded and committed to their tasks. If we can achieve those goals, then the returns to shareholders will look after themselves."[1153]

2.4.14 Group Interest

The question of "the interests of the company" has a connection to the question of group interest. It is necessary to address group interest one way or another, because one firm may use many legal entities in the ordinary course of business.

The practice of using many legal entities can be illustrated with the U-form, the M-form, and the use of SPVs. There is a distinction between the unitary corporation (the U-form) and the multidivisional corporation (the M-form).[1154] Traditional early firms were small and chose the U-form. Moreover, they used one legal entity to organise the whole firm. Modern large firms are multinational multi-unit businesses that have adopted the M-form. These M-form firms use many legal entities to organise their divisions and operations in many countries.[1155] In corporate finance, the incorporation of special-purpose vehicles (SPVs) belongs to the basic ways for firms to ring-fence assets, manage risk, and structure transactions. Moreover, firms customarily use SPVs for the purpose of tax planning and aggressive tax planning.[1156] Tax planning plays a major role in company groups with transfer pricing and internal loans as ways to minimise taxes for the whole group.

The alternative to these forms of ownership-based control is contract-based control. Parallel to the use of the U-form and the M-form, modern firms organise themselves with the help of contract-based networks and as platforms.[1157]

1153 The Economist, Bartleby. Straight talking, 29 December 2020.

1154 Chandler AD (1977).

1155 Ferrell A, Morley JD (2018) p 315: "Everyone would agree that PepsiCo is an operating business, not an investment fund, but it is hard to say exactly why. Though it would seem that most of Pepsi's assets consist of factories and brand names, in fact most of its assets are securities. The reason is that PepsiCo does not actually own the factories and brands directly —instead it owns securities in operating subsidiaries that own the factories and brands directly."

1156 European Commission (2017a); European Commission (2017b). Apple's Irish tax case was an example of aggressive tax planning. See the European Commission's letter to Ireland in Alleged aid to Apple, State aid SA.38373, 11.06.2014, C(2014) 3606 final. In the US, the US Federal tax reform made the repatriation of overseas profits easier. See the Tax Cuts and Jobs Act of 2017 (TCJA).

1157 Teubner G (1991); Teubner G (1993); Teubner G (2011); Gilson RJ, Sabel CF, Scott RE (2009); Jennejohn M (2016); Fenwick M, McCahery JA, Vermeulen EPM (2019); Grundmann S, Cafaggi F, Vettori G (eds) (2016).

Therefore, company law could be expected to have addressed the interests of the firm when the firm uses many legal entities. One might also ask whether there can be any fundamental difference between continental European law and US law in this respect. There might be a difference from a narrow doctrinal perspective. From the perspective of the firm, however, the difference could be much smaller because of the existence of functional equivalents.

Functional equivalents. There are three main ways to address the group interest in company law, namely particular group law (the recognition of the interests of the group or the firm),[1158] shareholder primacy (the recognition of the interests of the parent or residual claimants),[1159] or board discretion. Moreover, functional equivalents in company law probably are complemented by functional equivalents in tax law.

To protect creditors, there are general company and insolvency law constraints on the transfer of funds from one company to another. In groups, this leads to the phenomenon of structural subordination of debts. Particular provisions of group law may lay down duties of the controlling company in relation to the controlled company. Moreover, there are tax law constraints on aggressive tax planning.

One of the alternatives therefore is group law, that is, the recognition of the interests of the group or the interests of the firm as the interests of the group. The recognition of the group interest might be helpful not only for the parent company but also for the corporate bodies of subsidiary companies: "A major advantage of the recognition of the interest of the group is that it provides more clarity to the directors of the subsidiary as to which transaction or operations they can approve."[1160] The recognition of the group interest could reduce the firm's exposure to legal risk.

However, the existence of functional equivalents that even include board discretion and, in some countries, shareholder primacy explains why most large companies have chosen a group form but few countries have adopted

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1158 See Schön W (2019); Sørensen KE (2020).

1159 See Sørensen KE (2020) on the laws of New Zealand and Australia. According to section 131(1) of the New Zealand Companies Act 1993, a director of a subsidiary may be allowed to "act in a manner he or she belives is in the best interests of that company's holding company even though it may not be in the best interests of the company". According to section 187 of the Australian Corporation Act 2001, under certain conditions, a director will act in the interest of the subsidiary if "the director acts in good faith in the interest of the holding company".

1160 Antunes JE, Baums T, Clarke BJ, Conac PH, Enriques L, Hanak AI, Hansen JL, de Kluiver HJ, Knapp V, Lenoir N, Linnainmaa L, Soltysinski S, Wymeersch EO (2011) p 60. This group was the "Reflection Group on the Future of EU Company Law".

group law. The absence of group law or the failure to recognise the interests of the group in company law has not really hampered business.

This helps to understand why the European Model Company Act, an academic exercise for the harmonisation of company laws in the EU, did not provide any definition for "the interest of the group".[1161] We can have a look at the group interest in US, German, and French company law.[1162]

Groups in the US. After the basic railroad network was completed in the 1880s,[1163] it became possible to do business nationwide in the US. This influenced company law. New Jersey amended its general incorporation law in 1889 to permit one corporation (incorporated in one state) to purchase stock of another (incorporated in another state). The New Jersey provisions for the general incorporation of holding companies were soon copied by other states.[1164]

The existence of a legal framework for company groups increased mergers and acquisitions, firm size, and the number of legal entities used when organising each large firm.[1165] The last two decades of the nineteenth century "witnessed the initial massive expansion of American industry and with it the building of the first great integrated industrial empires".[1166]

The existence of holding companies and wholly-owned or partly-owned subsidiaries as the legal tools of enterprises[1167] raised questions in company law theory. Berle noted that "the entity commonly known as 'corporate entity' takes its being from the reality of the underlying enterprise, formed or in formation".[1168]

1161 EMCA Group (2017) section 15.16.
1162 For English law, see Petrin M, Choudhury B (2018) on group company liability.
1163 Chandler AD (1962) p 29.
1164 *Ibid*., pp 30–31; Wells H (2009) pp 583–585.
1165 Berle AA (1947) p 343; Dettling HU (1997) pp 16–17.
1166 Chandler AD (1962) p 42.
1167 Berle AA (1947) p 343: "As the scale of business enterprises enlarged, the process of subdivision began; hence subsidiary corporations wholly-owned or partly-owned; or holding companies combined into a series of corporations constituting a combined economic enterprise; and so forth. More often than not, a single large-scale business is conducted, not by a single corporation, but by a constellation of corporations controlled by a central holding company, the various sectors being separately incorporated, either because they were once independent and have been acquired, or because the central concern, entering new fields, created new corporations to develop them, or for tax reasons. In some instances, departments of the business are separately incorporated and operated as separate legal units." Conard AF (1976) p 165: "A close look at the corporate giants we know as 'GM', 'Exxon', and 'AT&T' reveals that what we are looking at in each case is not a single corporation, but a group of corporations linked in a single enterprise."
1168 Berle AA (1947) p 344.

The absence of group law in the US[1169] has not hampered the practice of using many legal entities to organise the firm. It suffices to study the corporate structure of any large firm in the US. While one of the main functions of group law is to ensure that the formally independent entities can be managed in a coherent way in the interests of the firm, the high level of management discretion in the US seems to facilitate the same thing. The vesting of powers in the board and the business judgment rule can be regarded as a functional equivalent to group law (section 2.4.13).

Groups in Germany. Germany is well-known for its group law. It developed in three stages. The development of particular group law was made easier by the recognition of the interests of the firm.

Legislative changes after the company law reform of 1870 were designed to improve the self-governance of the firm.[1170] The limited-liability company as such was a tool used by firms. Many legal entities were used in corporate groups.[1171] In 1917, Rathenau described how the German economy was dominated by large firms that had a group form.[1172]

The interests of the group were recognised in the Aktiengesetz of 1937[1173] that shielded people who acted in the interests of the group from liability. The wording of § 101(3) AktG 1937 applied to acts in the pursuit of "interests worthy of protection".[1174]

1169 Dettling HU (1997) p 16: "Die US-amerikanische Rechtsordnung verzichtet darauf, die einheitliche Leitung rechtlich selbständiger Unternehmen als Anküpfungspunkt für Regelungen zu wählen oder Regelungen daraufhin auszurichten. Die verfügt in diesem Sinne nicht über ein spezifisches Konzernrecht."

1170 Fischer CE (1955) p 115: "Es ist eindeutig, daß sämtliche Einzelbestimmungen der Aktiengesetze aus den Jahren 1870/1884/1931 und 1937 auf die AG als eine in sich unabhängige, wirtschaftlich selbständige Unternehmenseinheit abgestellt sind. Daraus leitete unsere Rechtsordnung die Anerkennung einer 'juristischen Person' ab, die mit der Kodifikation des Jahres 1870 zur 'inneren Selbstverwaltung' mündig erklärt worden war.

1171 Fischer CE (1955) pp 117–118: "Der eigentliche Kern der Problematik der Konzernbildung und eben der Tatsache, daß nahezu drei Viertel aller AG-en nicht, wie es sich der Aktiengesetzgeber vorgestellt hat, in sich wirtschaftlich selbständig und unabhängig sind, liegt darin begründet, daß es die wirtschaftliche Praxis verstanden hat, sich in dem Instrument 'Konzern' und seinen mannigfaltigen Spielarten neben dem Gesetz die Möglichkeit zu verschaffen, mehrere, bisher selbständige Unternehmen zu einer neuen wirtschaftlichen Einheit zusammenzufügen, ohne dabei die formelrechtliche Selbständigkeit der einzelnen Wieder aufgeben zu müssen."

1172 Rathenau W (1917a) p 22.

1173 Gesetz über Aktiengesellschaften und Kommanditgesellschaften auf Aktien, 30 January 1937.

1174 § 101(1) of AktG 1937: "Wer zu dem Zwecke, für sich oder einen anderen Gesellschaftsfremde Sondervorteile zu erlangen, vorsätzlich unter Ausnutzung seines Einflusses auf die Ge-

The Aktiengesetz of 1965 introduced a more detailed regulatory framework (Konzernrecht, group law) for company groups.[1175] AktG 1965 was the first to codify a law of groups for dependent stock corporations.[1176] In the light of the wording of AktG 1965, the central actors in German group law are firms (Unternehmen). For example, this influences the controlling shareholder's or parent company's duty of loyalty in the controlled company.[1177]

Groups in France. In French company law, the "Rozenblum doctrine" applies. The Rozenblum doctrine is based on the *Rozenblum* case and creates a special safe harbour applicable to criminal liability for the use of corporate assets within groups.[1178] A similar approach is adopted in the German Criminal Code[1179] and many European countries.[1180]

One may note that the Rozenblum case influenced the approach chosen for the European Model Company Act (EMCA). The "interest of the group" was recognised but not defined in the EMCA.[1181]

Conclusion. The question of "the interests of the company" is connected with the question of group interest. Both continental European law and US law facilitate the use of many legal entities in the group but do so in different ways. The existence of functional equivalents explains why the absence of particular group law in many countries has not hampered business.

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sellschaft ein Mitglied des Vorstandes oder des Aufsichtsrats dazu bestimmt, zum Schade der Gesellschaft oder ihrer Aktionäre zu handeln, ist zum Ersatz des daraus entstehenden Schadens verpflichtet." § 101(3) of AktG 1937: "Der Ersatzpflicht tritt nicht ein, wenn der Einfluß benutzt wird, um einen Vorteil zu erlangen, der schutzwürdigen Belangen dient." Fischer CE (1955) pp 107–108: "So brachte auch hier die Neufassung des Aktiengesetzes von 1937 nur eine formelle Legalisierung der bereits seit einiger Zeit durchgängig bestehenden Verhältnisse in der Praxis, als die neuen Vorschriften der §§ 70–85 den Vorstand an Stelle der Aktionärversammlung materiell zum obersten Organ der AG erhoben und als in Abs III des neuen § 101 nun der Gesetzgeber auch offiziell erkannte, daß Konzerninteressen im Sinne des § 101 als 'schutzwürdige Belange' anzusehen seien, die gegebenenfalls den Gesamtinteressen einer abhängigen AG – also auch den Interessen der am Gesamtkonzern gar nicht beteiligten außenstehenden Minderheitsaktionäre – übergeordnet werden dürften."

1175 See, for example, Scheuch A (2016).

1176 For a summary of group law in Europe, see Hopt KJ (2019a) II.3(b).

1177 See, for example, Cahn A (2017) § 16.03.

1178 See EMCA Group (2017) section 15.16, comments.

1179 § 266 of the German Criminal Code (Strafgesetzbuch).

1180 EMCA Group (2017) section 15.16, comments.

1181 *Ibid.*, section 15.16, comments.

2.4.15 Fostering Innovation and Organisational Flexibility

Fostering innovation has been used as an unstated design principle in company law (section 2.3.3).[1182] For the firm to survive in the long term, its corporate governance model should facilitate innovation by making it possible for the firm to adapt to changing circumstances. In practice, this can require long-termism, acceptance of risk, tolerance of failure, shielding management against short-term shareholders, and access to long-term equity funding.

It is easier for the firm adapt to changing circumstances and innovate if there is organisational flexibility. Organisational flexibility means here two things. First, it means operational and strategic flexibility and management discretion in operations and strategy. Both the German two-tier board model and the US managerial business model of the past have fostered innovation by shielding management against short-term shareholders. Fostering innovation has re-emerged as an important design principle in the governance of start-ups and growth firms in digital economy and in the technology sector (section 5.3). Second, organisational flexibility means structural flexibility and management discretion to adapt the corporate form.

We can have a brief look at how company law has fostered structural flexibility and management discretion to adapt the corporate form.

The implicit assumption in much of economic literature has been that Anglo-American legal institutions are so flexible that optimal organisational forms will emerge under competitive conditions.[1183] According to LLSV, legal systems based on Anglo-American common law are superior to civil-law systems based on formal codes.[1184] But whatever is perceived as superior may be a question of values. Obviously, it would not be acceptable to assume that neoclassical economic theories that have their roots in English common law reflect universal values and natural law. In the eighteenth century, Sir William Blackstone believed that English common law reflected natural law and was evidence of divine values.[1185]

As regards the choice of the corporate form, it could be misleading to describe US company law as much more flexible than continental European

1182 See Mäntysaari P (2012) Chapter 8; Belloc F (2012); Gonzales-Bustos JB, Hernández-Lara AB (2016); Asensio-López D, Cabeza-García L, González-Álvarez N (2019).

1183 For a critique, see Lamoreaux NR, Rosenthal JL (2005).

1184 La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1997, 1998, 1999).

1185 See Blackstone W (1765–1769).

company law.[1186] The choice of organisational structures goes hand in hand with the choice of legal entities. Continental European businesses have benefited from the availability of a wide range of alternative company forms (section 2.4.9) such as the limited partnership, the limited-liability company for small firms (GmbH, SARL), the limited-liability company for large firms (AG, SA), EU company forms (SE), and the national company forms of other Member States of the EU. The flexibility of the limited partnership made it a functional equivalent and popular alternative of the early limited-liability company in continental Europe. Continental European company groups can consist of a fleet of legal entities incorporated in different countries, making it more difficult to compare the economic outcomes of perceived company law "flexibility" in different countries.

The flexibility of continental European company law can be illustrated with a comparison of French and US company law in the mid-nineteenth century.

In mid-nineteenth-century France, company law ensured flexibility for the allocation of power in companies. While the incorporation of limited-liability companies was not yet free, entrepreneurs and investors could choose between a number of company forms: the ordinary partnership (société en nom collectif), the limited partnership (commandite simple), the limited partnership with shares (commandite par action), and the limited liability company (société anonyme).[1187] The various partnership forms were based on contracts. A société anonyme was managed and monitored by shareholders. It was thus easier for shareholders to choose the arrangement they thought fit and change it if necessary.[1188]

US board structures were not really very flexible in the mid-nineteenth century. The incorporators did have a right to choose the allocation of power in the company at the time of incorporation. That choice fixed the allocation of power in the company due to the irrevocable nature of the corporate charter (*Dartmouth College*). The incorporators of companies that survived the test of competition and time had chosen one particular model. All powers in the company were vested in the directors. The increased discretion of managers was likely to help com-

1186 See Lamoreaux NR, Rosenthal JL (2005) p 55; Guinnane T, Harris R, Lamoreaux N, Rosenthal J (2007).

1187 The small limited-liability company (société à responsabilité limitée) was not introduced until 1925.

1188 Lamoreaux NR, Rosenthal JL (2005) p 31: "If the Anglo-American system of common law is intrinsically superior to French civil law, then one might expect U.S. businesses to have faced a freer, more flexible contracting environment than French businesses in the nineteenth century—as well as at the present time … [T]his expectation did not hold true for the period of industrialization. Not only did U.S. law offer business people a more limited menu of organizational forms, but the possibilities for adapting the basic forms to specialized needs were much greater in France than in the U.S."

panies with creative managers and good management practices prevail in competition in the mid-nineteenth century: “Corporate law favored strong central direction of assets, barred stockholders from a direct managerial voice, and accorded management considerable assurances of tenure.”[1189]

In Germany, the company law reforms of 1870 and 1884 achieved roughly the same standardisation as US corporate practice by separating share ownership and management and facilitating management discretion.

2.4.16 Choice of Societal Objectives and the Key Design Principle

To regulate companies in a rational way, the state needs to choose (a) one or more societal objectives for the regulation of companies and (b) design principles with which the intended objectives can be reached (section 2.3.3). However, the company law system will not be coherent without a key design principle.[1190]

Societal objectives. The societal objectives of the regulation of companies are neither universal nor created by nature. There have been different objectives depending on the country and the historical point in time.[1191] For example, the societal objectives may have related to industrial policy, economic policy, the distribution of income and wealth, the particular interests of a class, or general political objectives. We can have a brief look at examples of the effect of these alternative or complementary societal objectives.

Industrial policy. Industrial policy was an important driver of codifications in the nineteenth century and has played a role in company law ever since. The growing importance of manufacturing gave reason to introduce general incorporation laws. For example, the state of New York adopted the “Act Relative to Incorporations for Manufacturing Purposes” in 1811. Much later, company law change was influenced by financialisation and the increasing weight of the interests of institutional investors and the financial industry. After the financial crisis of 2007–2009, many countries have been inspired by Silicon Valley and paid more attention to the needs of technology firms. Moreover, countries have focused more on SMEs in their industrial policy.

Economic growth. When the chosen driver of the regulation of companies is economic growth in a liberal market economy, the state tends to focus on the central role of firms for sustainable economic development. In practice, this

1189 Bratton WW (1989) p 1485.
1190 This idea is not new. In De doctrina Christiana published between 397 and 426, Saint Augustine of Hippo used “love” as the key to interpreting any text fragment in the Bible.
1191 See, for example, Mäntysaari P (2012) section 6.3.

can mean shielding the board and managers from company outsiders and protecting management discretion. Management discretion and protection against short-term shareholders can make it easier for firms to benefit from business opportunities and adapt to changes in the marketplace.

For example, popular design principles for the attainment of this objective include the separation of powers, vesting powers in the board rather than shareholders, two-tier board structures, and the business judgment rule.

Moreover, economic policy may explain why it is deemed necessary to provide a large number of different business forms for firms. The availability of many business forms can make it possible for each firm to organise its business in a way that suits the firm best. The one-size-fits-all principle would be likely to hamper growth.

Market integration. In addition to economic growth, market integration has acted as an important goal of economic and regulatory policy. It increases trade and economic growth. Moreover, it acts as a driver of the convergence and mutual recognition of company law regimes and the adoption of common regimes.

The distribution of income and wealth. Industrial policy and economic policy contribute to economic development. Sustainable economic development is even connected to the distribution of income and wealth (Chapter 1).[1192] If companies are the predominant way to organise society, one may ask how income and wealth generated by companies should be distributed.

The core question seems to be: Why should profits be distributed to shareholders? After all, many of them have done very little to earn them.[1193]

First, one of the alternative answers to this question could be to say that the wide distribution of shareholdings is important and try to make everybody a shareholder. Berle wanted "a stockholder's share in the United States [to be] distributed to every American family" through a "[w]ide distribution of stockholdings".[1194]

1192 OECD (2015a).

1193 Smith A (1776) Book I, Chapter I: "It is not from the benevolence of the butcher, the brewer or the baker, that we expect our dinner, but from their own self interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages."

1194 Berle AA (1968) p xxxv: "Why have stockholders? … Privilege to have income and a fragment of wealth without a corresponding duty to work for it cannot be justified unless most members of the community share it. A guaranteed annual wage for all, a governmentally assured minimum income, a stockholder's share in the United States distributed to every American family – these are all different ways of giving Americans capacity to settle their own lives rather than having their lives settled for them by blind economic forces, by compulsions of poverty or by

Second, the opposite of the previous approach would be to allocate income and wealth to members of a particular class. This approach is not limited to corrupt regimes and failing societies. More income and wealth has recently been allocated to executives, wealthy individuals, and the financial sector. The popular design principle to implement this objective is shareholder primacy or the notion of shareholders as the principal and managers and board members as their agents.[1195] This type of regulation may be an example of regulatory capture.

Third, one could try to redefine the function of shareholders. The function of shareholders depends on the choice of theory and the choice of perspective. Shareholders really have no function when one assumes that shareholders are the principal of the agency theory of neoclassical economics. The principal is the blind spot of the agency theory. Different shareholders can have different functions when one looks at their function from the perspective of the firm. For example, angel investors and venture capital investors tend to have an important function for the firm as a source of cash and ancillary services.[1196] Shareholders have a function under the agency theory, if the firm is defined as the principal and shareholders as agents.[1197]

Fourth, one could try to redefine the role of corporations in market economy. Obviously, companies should not be responsible for all areas of society. There are societal functions that are run better in the public sector and without applying market-based mechanisms, and societal functions that should belong to the private sector and fall within the scope of market-based mechanisms. If the private sector is too large, corporations may contribute to increasing economic and political polarisation.

General political objectives. Companies can be allocated functions and duties that are closely connected to general political objectives. These functions and duties are found in all kinds of states ranging from authoritarian states[1198] to democracies.

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regulations of a social-work bureaucracy. Wide distribution of stockholdings is one way of working toward this."

1195 Jensen MC, Meckling WH (1976). See also Hansmann H, Kraakman R (2001).

1196 Gilson RJ (2003); Mäntysaari P (2010a) section 8.7 and sections 9.2.5 – 9.2.6; Mäntysaari P (2012) sections 6.4 and 7.9.

1197 Compare Macey JR (2013) p 913: "[W]hile Professor Stout is crystal clear in her desire to remove shareholders as top dogs in the corporate governance pecking order, she is frustratingly silent on where she would put them." Shareholders are here put in the place of agents under the principal-agent theory.

1198 See, for example, § 70(1) of the German Aktiengesetz of 1937.

In democracies, these functions and duties can be based on law or broader societal expectations. For example, corporate social responsibility (CSR), the pursuit of Environmental, Social, and Governance (ESG) principles, or adherence to Sustainable Development Goals (SDG) may belong to behaviour that generally is expected from corporations.[1199] Company law could be used not just to legitimate corporate power and exempt managers from liability but even as a means to regulate corporate power.[1200]

In authoritarian states with weak rule of law, duties connected to political objectives do not necessarily have to be based on law. Backed by the force of the authoritarian regime, such duties can exist in fact on a case-by-case basis.

Key design principle. The societal objectives of the regulation of companies can act as important drivers of regulation. They are complemented by general objectives shared by all regulation. Such general objectives exist, because members of the legal community tend to share certain ideas about the ideal characteristics of the legal system. For example, members of the legal community value the internal coherence of law. Legal scholars and judges customarily seek to cure the potential internal conflicts of the legal system through interpretation and systematisation. Obviously, coherence lies behind all four of von Savigny's well-known canons of interpretation.[1201]

It would not be possible to achieve and maintain the societal objectives and internal coherence of company law without a key design principle that runs through the whole company law system. While the state may have multiple policy preferences when regulating companies, both the state and many members of the legal community will also need a key objective and design principle for company law. Without such a key design principle, it would not be possible to build a coherent and meaningful company law system.

The existence of a key design principle in each country's company law system contributes to the path dependency of the system and makes it difficult to add legal or theory transplants that reflect conflicting design principles. Transplants that reflect conflicting design principles can become legal irritants or theory irritants in the system.[1202]

1199 See, for example, Sjåfjell B (2018) on how "the corporation" should be "a sustainable market actor".

1200 Mitchell DT (2009).

1201 von Savigny FK (1840) Buch I, Kap. IV, § 33.

1202 Watson A (1974); Teubner G (1998). For theory transplants and irritants see Mäntysaari P (2017) pp 25–27.

The stakeholder approach has not been used as the key design principle, and attempts to use shareholder primacy as a key design principle have not worked well.[1203]

Fostering the long-term interests of the firm is the most enduring key design principle in company law. The key design principle in German and French company law has been protecting the firm (das Unternehmen, l'entreprise). In the US, the functional equivalent consisted of *Dartmouth College*, the practice of vesting all powers in the board, dispersed share ownership, and the managerial culture. They protected professional management and firms until the 1970s. The managerial business model was then replaced by the financial business model and shareholder primacy in US corporate law discourse.[1204] Shareholder primacy failed and was partly made outdated by the business model of technology firms.

2.5 Conclusion

The introduction of the free incorporation of limited-liability companies made it necessary to develop many design principles for company law. The evolution of design principles has reflected economic change and the increasing complexity of firms. At the same time, design principles have acted as drivers of economic change.

Design principles are not fixed. There is convergence of design principles, but the relative weight of a design principle may depend on the country and the point in time. Convergence is hampered and path dependency increased by the matrix nature of company law and the general objective of the coherence of a country's legal system.

There are fundamental differences between continental European company law and the company law of common law countries. They have followed different paths since the eighteenth century and are to some extent based on different design principles. If you scratch the surface, the limited-liability company has dif-

1203 For a different view, see Hopt KJ (2021) p 21: "The classic approach is the one that prevails in the United States: the purpose of a corporation is to make profit for the shareholders. On the other side of the spectrum stands Germany. There, the board is responsible to promote the interests of all stakeholders, i.e. the shareholders, labor and the public good … Other European states, such as the United Kingdom, follow a middle way with the so-called enlightened shareholder approach …"

1204 Jensen MC, Meckling WH (1976); Bratton WW (1989) pp 1476–1477.

ferent basic characteristics in continental European countries and common law countries.[1205] We can have a look at some fundamental differences.

Continental European company law. The most fundamental design principles characteristic of continental European limited-liability company law include: the recognition of the company as a separate legal entity distinct from its shareholders; the separation of functions between collegiate organs; the separation of monitoring and management; the duty to act in the interests of the company; the recognition of the firm and the distinction between the firm, the legal entity, and shareholders; facilitating the provision of shareholders' services; and the use of different company forms. The key design principle is to foster the interests of the firm.

The recognition of the limited-liability company as a separate legal entity distinct from its shareholders is more fundamental than the limited liability of shareholders. As a separate legal entity, the limited-liability company is responsible for its own obligations. No third party is responsible for the company's obligations. In this respect, there is no fundamental difference between the liability of shareholders, lenders, or any third party in relation to the company or other third parties. In practice, however, the liability of shareholders was reduced to that of an outsider only after the separation of share ownership, management, and monitoring. Before the separation, a shareholder could be liable in his capacity as member of a management or monitoring body.

The separate legal personality of companies means that shareholders are neither legal nor moral owners of the company. Again, there is no difference between shareholders and third parties. This reflects the fact that the roots of the continental European limited-liability company lie in the so-called property corporation and the organic theory (von Gierke).

The separation of functions between different collegiate organs of the company required internal disclosures, improved the quality of each function, reduced abuse, addressed the who-monitors-the-monitors problem, and improved the self-enforcement of the governance model (section 2.3.3).[1206] The separation of share ownership, monitoring, and management facilitated permanent and specialised management and monitoring functions. The modern limited-liability company was created by the separation of these functions in the German com-

1205 According to Kraakman and co-authors, however, they have the same characteristics. According to them, a principal function of corporate law is to provide business enterprises with a legal form that possesses five core attributes: legal personality, limited liability, transferable shares, delegated management under a board structure, and investor ownership. Kraakman R, Armour J, Davies P, Enriques L, Hansmann H, Hertig G, Hopt K, Kanda H, Rock E (2009).
1206 See Mäntysaari P (2012) Chapter 8 on self-enforcement as a design principle.

pany law reform of 1884. It had by then turned out that neither the management nor the monitoring function could be left to shareholders.

The recognition of the company as a separate legal entity and the separation of functions were complemented by a duty to act in the interests of the company. Continental European – basically French and German – company law distinguishes between the legal entity, shareholders, and the firm (das Unternehmen, l'entreprise). The duty to act in the interests of the company means the duty to act in the interests of the firm. The recognition of the interests of the firm facilitated the growth of firms and company groups.

Where functions are separated and the interests of the company are defined as the interests of the firm, even shareholders have a function as sources of capital and ancillary services. The company law rights of shareholders facilitate the provision of these services. For example, this explains the transferability of shares, the powers of the general meeting as one of the organs of the company, and the limited financial rights of shareholders. The European legal capital regime in particular makes several corporate decisions subject to the consent of the general meeting.[1207]

It is characteristic of French and German corporate governance that share ownership is concentrated and that there is a controlling shareholder.[1208] Concentrated share ownership in France and Germany may have made it easier to accept both the company law rights of the general meeting and the legal protection of management discretion. The existence of controlling shareholders with de facto rights[1209] in large companies may have made it easier to allocate legal veto

1207 See Mäntysaari P (2010c) sections 5.3 – 5.4.

1208 See, for example, Fanto JA (1998a) pp 39 – 40 on family ownership and the role of the traditional role of the state in France.

1209 For a critical view lamenting the exclusion of shareholders other than controlling shareholders from management and monitoring, see Fischer CE (1955) p 94: "Indessen bleibt andererseits auch für die Folge zu beachten, daß in Fällen des Großaktionär-Paketbesitzes und der konzernmäßigen Verfilzung mit anderen Unternehmen in AG- oder GmbH-Form die Hauptversammlungen häufig auch deshalb 'verödeten', weil die wirklichen Entscheidungen gar nicht mehr in und durch dieses Organ getroffen wurden, sondern im Schoße des Aufsichtsrats oder gar außerhalb der AG in den Gremien der Konzerndachgesellschaft." *Ibid*., p 100: "Seit der Regelung des Aktienrechts in den Jahren 1870 und 1884 ging eine an Wirksamkeit ständig zunehmende Tendenz in der Praxis der Aktiengesellschaften dahin, die Rechte des einzelnen Aktionärs zur Teilnahme an der Selbstverwaltung der AG einzuengen, ihre Ausübung mangels loyaler Unterrichtung über die geschäftlichen Vorgänge gegenstandslos zu machen und dem einzelnen, kleineren oder mittleren Aktionär die Wahrnehmung individueller Mitgliedschaftsrechte schlechthin zu verleiden. Dies alles jedoch nur insoweit, als die Aktionäre nicht zu den, die Verwaltung der AG tragenden Großaktionären und Paketbesitzern gehörten."

rights to the general meeting under the legal capital regime and protect management with a two-tier board structure.

Since small and large firms have different needs, continental European company law has ensured that there is a pool of company forms. It is customary to distinguish between the large (public) limited-liability company (such as the AG and the SA) and the small (private) limited-liability company (such as the GmbH and the SARL). The limited partnership is a functional equivalent for many firms due to its flexibility. Firms may use foreign company forms recognised as companies under the rules of international private law and, in the EU, the freedom of establishment.

The key design principle is fostering the interests of the firm. This design principle is made possible by the distinction between the firm, the legal entity, and shareholders. The notion of the firm in France and Germany is embedded in their commercial law codes that provide special rules for various kinds of traders and businesses.[1210] The interests of the firm were recognised in Germany in the 1920s (Unternehmensinteresse) and later in France (l'intérêt social). The interests of the firm are still respected in modern German and French company law and corporate governance codes.

US company law. It is much harder to name the key design principle of US company law.

The states first adopted general incorporation laws that were prescriptive. There was a fundamental difference between this regulatory approach and the laissez-faire approach of the UK. The laissez-faire approach is characteristic of the commercial law of common law jurisdictions that rely on the freedom of contract as the default rule. It is reflected in the use of common law notions of "contract" and "agency" in company law.

US and UK company law came closer in the second half of the twentieth century when US states began to enact more flexible general incorporation statutes and UK company law became more prescriptive.[1211] Both countries ended up sharing the same financial business model in corporate practice.

There are fundamental differences between US company law and continental European company law.

In the US, the limited-liability company is regarded as a separate legal entity and a legal fiction (von Savigny). The corporate charter is regarded as a contract between shareholders. The US limited-liability company has its roots in the so-called member corporation. Since the organic theory (von Gierke) is not applied,

1210 Mäntysaari P (2017) section 7.5.3.

1211 Harris R, Lamoreaux NR (2019). See also Bebchuk LA (2005).

"the general meeting" is not an organ of the company and shareholders use their powers "in general meeting".

In US company law, it is customary to distinguish between the legal entity and shareholders. However, there is no distinction between the legal entity, shareholders, and the firm. Since the continental European notion of the firm does not exist in the US and the legal entity as a legal fiction has no interests of its own, the only interests that remain are the interests of shareholders. The default interests of the company therefore are the interests of shareholders. This default rule is complemented by the stakeholder approach. The stakeholder approach can partly be explained by the failure of US company law to distinguish between the legal entity and the firm.

The contractual basis of the charter and the use of agency constructions would make it more difficult to argue why shareholders should not be liable for the company's obligations. This makes the limited liability of shareholders a more central design principle in US company law.

There is no clear statutory separation of functions in the company. The distribution of work can be regulated in the charter. In corporate practice, all powers are vested in the board. This means that there is no clear separation of monitoring and management under the charter. The weak separation of functions is addressed in corporate practice by delegating management functions to professional managers and by using board committees that consist of "independent" board members.

The weak separation of functions may be connected to the fact that firms grew bigger in the integrated US markets in the late nineteenth century and got a more dispersed share ownership structure in the early twentieth century. As both the legal and de facto powers of shareholders were by then rather limited,[1212] there was little reason to protect management discretion by introducing a statutory separation of monitoring and management. Corporate powers were already vested in the board.[1213] Management by the board was protected by the irrevocable nature of the corporate charter (*Dartmouth College*), the managerial business model, and the business judgment rule.[1214]

1212 See Bebchuk LA (2005).

1213 This is still the case. See § 8.01(b) of the Model Business Corporation Act (2016 Revision) (December 9, 2016).

1214 Macey JR (2013) pp 914–915: "Most people think that the role of corporate governance is to protect shareholders from managers (i.e., to control agency costs). Professor Stout, on the other hand, appears to embrace the view that the role of corporate governance is to protect management from shareholders." For the protection of management against shareholders, see even Mäntysaari P (2010a) section 8.3 (the function of the board); Mäntysaari P (2012) Chapter 8 (self-

Moreover, the weak separation of functions could reflect the fact that US company law traditionally does not have a model with two company forms, one for small firms and the other for large firms. Company law generally reflects the characteristics of small firms or – historically – member corporations. The particular aspects of large listed companies are addressed in securities law in the US. This said, different states can focus on different kinds of firms in their own state company laws with the Delaware corporation as the company form of most listed companies.

The weak separation of monitoring and management at board level makes the governance model less self-enforcing (section 2.3.3). Instead of a strict separation of monitoring and management and the duty to disclose information internally between corporate bodies under company law, there is reliance on public disclosures and the market for corporate control. The US litigation culture that could reduce the self-enforcement of the governance model has been balanced by mechanisms that protect managerial discretion and reduce incentives to sue.

The overall legal framework of the company – with no clear separation of functions and the interests of the company interpreted as the interests of shareholders – makes US boards structurally weak.

While reliance on public disclosures in the US can increase transparency, it does not protect the management function. The separation of monitoring and management at board level in Germany protected German boards and made them slower to give up the managerial business model. The weak separation of monitoring and management left the boards of US public companies vulnerable and made it more difficult for them to resist the financial business model.

Regardless of this structural weakness, board discretion and the management function used to be protected until the 1970s. They were protected by the irrevocable nature of the corporate charter (*Dartmouth College*), the business judgment rule, and the dispersed share ownership structure that made the managerial business model possible. The narrative mattered.[1215] However, the narra-

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enforcement of the governance model) and Chapter 9 (fostering innovation). For the agency costs of funding with the firm as as the principal, see Mäntysaari P (2010c) section 2.4 pp 16 – 17.

1215 See even Fanto JA (1998a) pp 38 – 39: "In his authoritative account of U.S. corporate governance, Professor Mark Roe explains that U.S. cultural forces helped maintain the separation between corporate ownership and control. In his view, as the examples of corporate governance in other countries demonstrate, financial institutions could address this separation and bridge the gap. A financial institution could make a large equity investment in a corporation and thereby act as a financial intermediary for smaller investors. Its significant stake in an enterprise would give it the incentive to monitor management closely, and it could thus act as a counterweight to management's power. However, the U.S. cultural forces of populism and federalism shaped U.S. law to keep financial institutions from assuming a role in corporate governance."

tive started to change in the 1970s. When retail investors' direct share ownership was replaced by institutional share ownership, the structural weakness of US boards was exposed and exploited by institutional investors. The managerial business model was replaced by the financial business model.

The change from the managerial to the financial business model and shareholder primacy was made to look inevitable and legitimate by the reception of neoclassical economic theory. It reflected eighteenth-century English common law.

Shareholder primacy led to mounting problems. It did not work for start-ups and growth firms in digital economy. In 2019, Business Roundtable recommended a stakeholder approach.

What can we learn? The most enduring design principles for company law seem to be continental European. The fact that US corporate governance can drift from the managerial business model to shareholder primacy and, after its failure, seek refuge in a stakeholder approach, indicates that its basis is not stable. We can learn that continental European design principles could be beneficial for the company law of the future.

Limited-liability companies do not share the same fundamental characteristics in all jurisdictions. The fundamental differences between continental European company law on one hand and the company law of common law countries on the other delayed the reception of neoclassical economic theory in French and German company law.

Shareholder primacy looks outdated in the light of the funding practices of growth firms and the mechanisms of digital economy. In growth firms, shareholders have a function as sources of funding and suppliers of ancillary services. They will not be chosen unless their services are useful (Chapter 5). For example, employees can be paid with shares or share options, angel investors and venture capital firms can provide valuable advice and signal the quality of the firm, consultants can provide "sweat capital", and law firms might invest in their clients.[1216] The functions and services of shareholders can only be seen from a non-shareholder perspective.

Shareholder primacy itself is a case of market failure. Both financial investors and managers have financial incentives to apply the mainstream principal-

1216 Miller K (2000). For an early example of sweat capital, see Ogereau JM (2014) p 349 on societas evangelii, that is, "a partnership for the propagation of the gospel, whereby the Philippians provided the pecunia (funds), while Paul supplied the opera and ars (labor and skill)". Cited in Fleischer H, Cools S (2019) p 465 footnote 11.

agent theory.[1217] In particular, both have financial incentives to: regard shareholders as principals and managers as agents; argue that the incentives of board members and CEOs should be aligned with the rather short-term financial interests of shareholders;[1218] focus on financial rewards only;[1219] and by doing so use incentive schemes that do not reflect the mechanisms of real organisations.[1220] The growing demand for the mainstream principal-agent theory and shareholder primacy may have given academics incentives to apply both as the main frame of reference in research. The mainstream principal-agent theory has been applied in law and economics and much of company law discourse.[1221] The drivers of the self-fulfilling trend of the principal-agent theory[1222] have been so powerful that some scholars were fast to proclaim the victory of the shareholder primacy model over its competitors.[1223]

The choice between the interests of the firm and shareholder primacy is not without externalities. Generally, the choice of shareholder primacy seems to lead to bad societal outcomes. Financial investors and managers that prefer to maximise their own welfare in the short term have incentives to choose shareholder primacy regardless of externalities.

1217 See Bebchuk LA, Fried JM, Walker DI (2002); Bebchuk LA, Fried JM (2003); Lie E (2005); Reich RB (2015) p 92: "[S]tarting in the early 1980s, large corporations and their top executives, major actors on Wall Street, and other wealthy individuals have exercised disproportionate and increasing influence over how the market is organized."

1218 PwC (2018) p 1: "Shareholder influence continues to grow, as institutional investors now own 70 % of US public companies. These investors are increasingly vocal about what they want to see from boards."

1219 Simon HA (1991) p 30 on many other incentives: "[W]e should begin with empirically valid postulates about what motivates real people in real organizations. I shall argue that such postulates can be derived from four organizational phenomena whose roles are amply documented in the literature on organizations: authority, rewards, identification, and coordination."

1220 Holmström B, Milgrom P (1987) pp 303–304: "Agents in the real world typically face a wider range of alternatives and principals a more diffuse picture of circumstances than is assumed in the usual models. Optimal schemes derived from a spare and approximate model of reality may perform quite poorly in the richer real environment." Simon HA (1991) p 30: "Why not assume that maximizing the firm's profit is precisely what maximizes the utilities of executives and other workers? In a society of robots, an owner would not settle for less. But most of us would think this an unrealistic assumption to make for a human society. An organization theory with an unspecified utility function is not a theory at all. And one with an unrealistic utility function does not provide a basis for understanding real organizations."

1221 See, for example, Orts EW (2015) pp 28 and 53.

1222 Ferraro F, Pfeffer J, Sutton RI (2005); Locke R, Spender JC (2011).

1223 Hansmann H, Kraakman R (2001).

The choice of theory matters, because theory can be applied first to spot structures that are not aligned with theory and then to align the structures with the chosen theory.[1224] Overreliance on the property rights theory and the principal-agent theory increase the transfer of assets to the alleged "owners" and "principals" as well as their "agents". Hart and Holmström have noted that the property rights theory "seems to describe owner-managed firms better than large companies".[1225] Overreliance on the property rights theory and the mainstream principal-agent theory not only has facilitated rent-seeking and increased financial inequalities. It has even made management practices worse.[1226]

In the context of company law and corporate governance, the principal-agent theory of neoclassical economics has suffered from its too close connection to eighteenth-century English common law. The principal-agent theory should be freed from its connection to legal notions of English common law. There is no good reason to limit the "principals" and "agents" of the agency theory to the shareholder-principals and director-agents of English common law. Such a limitation is particularly absurd in civil law jurisdictions. Freed from the connection to English common law, the agency theory of neoclassical economics should be flexible enough to permit the choice of the firm as the principal and the choice of shareholders, board members, managers, and many other parties as the firm's agents.

To increase the number of companies with publicly-traded sares and retail investors' direct shareholder in the future, we should look at the firm as the principal and shareholders as agents.

Moreover, we should choose even other design principles that work for firms and retail shareholders. Most of them can be found in continental European company law. There is reason to distinguish between the legal entity and its business organisation ("the firm"), interpret the interests of the company as the long-term interests of the firm, provide for a legal duty to act in the long-term interests of the firm, ensure specialised management and monitoring, and separate monitoring and management at board level. Moreover, there is reason to avoid overreliance on public disclosures and positive financial executive rewards. Perhaps paradoxically, we should build on continental European company law to create people's capitalism.

1224 See, for example, Fanto JA (1998a) p 53: "[T]he director in France has often been a corporate governance disappointment."
1225 Hart O, Holmström B (2010).
1226 See, for example, Ghoshal S (2003); Ghoshal S (2005); Bebchuk LA, Fried JM, Walker DI (2002); Saez E (2017).

Since historical company law alone cannot say what should be done to increase the number of companies with publicly-traded shares and retail investors' direct shareholding, we will need to study stock exchange law (Chapter 3) and securities law (Chapter 4) as well.

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3 Trends in the Regulation of Stock Exchanges

3.1 General Remarks

Equity markets are regulated on a piece-meal basis. Stock exchange laws focus on the marketplace. Stock exchange laws are complemented by the regulation of market participants and their actions in company law and securities law. There are even other relevant areas of sectoral regulation such as the regulation of financial intermediaries and tax laws.

Stock exchanges have been seen as a public good.[1] In mainstream economics and legal science, it has been assumed that "[s]tock exchanges play a decisive role in capital allocation and provide key infrastructure for a country's markets".[2] In particular, it is believed that "[e]xchanges are the main gateway through which corporate issuers access public financing [and that exchanges] provide liquid secondary markets, which are a precondition for effective primary markets."[3] For these reasons, "each country has established a strict regulatory framework to safeguard the operation of its stock market".[4] The state may need to protect the function, integrity, efficiency, and stability of stock exchanges and public stock markets.[5]

But something seems to have gone wrong in the light of the fact that the number of companies with publicly-traded shares is low and IPOs are not as popular as they used to be.[6]

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1 Fleckner AM (2006) p 2592: "As Congress wrote into the Securities Exchange Act in 1975, 'The securities markets are an important national asset which must be preserved and strengthened.'"

2 Gadinis S, Jackson HE (2007) pp 1242–1243. For the mechanisms, see Fox MB, Glosten LR, Rauterberg GV (2019) pp 35–36.

3 Gadinis S, Jackson HE (2007) p 1249.

4 *Ibid.*, pp 1242–1243.

5 Mues J (1999) p 48: "Als anerkanntes Regelungsziel deutscher Börsengesetzgebung hat sich Funktionsschutz bzw. Funktionsfähigkeit der Börse erst in den sechziger Jahren im Gefolge der auf europäischer Ebene geführten Kapitalmarktdiskussion durchgesetzt … Unter dem Begriff 'Funktionsschutz" ist nach alledem ein Bündel von Regelungszwecken zu fassen, denen allein gemein sind, daß sie auf eine Steigerung der Effizienz des Kapitalmarktes gerichtet sind." *Ibid.*, p 48: "Die gesetzliche Berücksichtigung von Anlegerschutzinteressen wird aus dem verfassungsrechtlichen Sozialstaatsprincip hergeleitet." For a list of functions for stock exchanges from a policy perspective, see Gadinis S, Jackson HE (2007) pp 1248–1250. See also Moloney N (2014) V.1.2.2, p 429: "The regulation of trading venues is primarily directed to ensuring market integrity, efficiency, and stability; in support of these aims, it has long been associated with protecting liquidity."

6 Gao X, Ritter JR, Zhu Z (2013); Díez FJ, Leigh D, Tambunlertchai S (2018).

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This raises fundamental questions. Why do stock exchanges do what they do? What explains the existence of stock exchanges and the organisation of their activities? What is the function of stock exchanges? What has gone wrong?

The answers can depend on the function of stock exchanges for different stakeholders. Different market participants use stock exchanges for different purposes. Moreover, the functions of stock exchanges have changed in the course of time. The interests of issuer-firms do not seem to have mattered very much,[7] which is likely to have made firms opt out of public stock markets.

Non-financial issuers. From the perspective of non-financial issuers, modern stock exchanges provide particular kinds of services (section 8.2). They provide core services and ancillary services.

First, the traditional core service of stock exchanges is to facilitate trading and the provision of liquidity. It has been said that "the business of an exchange involves almost purely the provision of liquidity".[8]

Second, stock exchanges facilitate the provision of shareholders' services to the issuer-firm. Trading and liquidity are connected to this core service. Shareholders sometimes act as a source of capital but always as providers of ancillary services to the firm (section 2.3.3).[9] Stock exchanges can facilitate the provision of both kinds of shareholders' services.

Shareholders either are or are not a source of capital. As a source of capital, they can provide either cash or non-cash assets.[10] In listed companies, shareholders are not a good source of cash.[11] In mature companies, internal funding and debt are by far the biggest sources of cash.[12] Rights issues are rare, because

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7 For example, the interests of the issuer-firm were not recognised in Fox MB, Glosten LR, Rauterberg GV (2019) pp 36–37. The authors represent the view that maximising share price is in society's best interests.

8 Macey JR, O'Hara M (2005) pp 568–569. See even Mahoney PG, Rauterberg GV (2018) p 225.

9 Mäntysaari P (2010a) section 8.7 and sections 9.2.5–9.2.6; Mäntysaari P (2012) section 7.9.

10 For example, Articles 70 and 72 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law) distinguish between increase in capital by consideration in cash and by consideration other than in cash.

11 Doidge C, Kahle KM, Karolyi GA (2018) p 9 on how US have been repurchasing more equity than they have issued: "The amount spent on repurchases since 1997 is $3.6 trillion greater than the amount raised from issuing equity over the same period." This figure does not include dividends paid to shareholders during the same period of time. See *ibid*., p 13.

12 Mayer C (1990) p 310; Mayer C (1998); Holmström B (2015) p 7; Mishkin FS, Eakins SG (2012) p 64: "Although the dominance of financial intermediaries over securities markets is clear in all countries, the relative importance of bond versus stock markets differs widely across countries. In the United States, the bond market is far more important as a source of corporate finance: On average, the amount of new financing raised using bonds is 10 times the amount raised using

they can reduce share price. Shareholders may nevertheless be a valuable source of non-cash assets. For example, it is customary for a listed company to use its shares as a means of payment in mergers or share exchanges. The target's shareholders will then become the acquirer's shareholders.

In all companies, shareholders always provide ancillary services. Such ancillary services have been called "non-cash contributions" or "non-capital contributions" in the venture capital context[13] with "non-capital contributions" perhaps the better term to describe ancillary services.

Many of the ancillary services of shareholders relate to what Hirschman calls exit, voice, and loyalty.[14] Combined with the transferability of shares (exit), the mechanism of price discovery facilitates the valuation of shares by shareholders and gives them an incentive to monitor management (voice). The market valuation mechanism and the firm's voluntary submission to the legal framework of the exchange act as constraints on the governance and management of the firm, reduce the perceived risk exposure of long-term investors, and facilitate long-term investments (loyalty).

From the perspective of the firm, some shareholders are better sources of capital and/or ancillary services than other shareholders.[15] For example, when listed companies need cash and equity capital, rights issues may be replaced by private investments in public equity (PIPEs).[16] Founders, controlling shareholders, and large blockholders can be particularly valuable providers of ancillary services, but modern stock exchanges facilitate the provision of some ancillary services even by retail investors.[17]

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stocks. By contrast, countries such as France and Italy make more use of equities markets than of the bond market to raise capital."

13 Gilson RJ (2003).

14 Hirschman AO (1970).

15 Mäntysaari P (2010a) section 8.7.2; Mäntysaari P (2012) section 7.9. For the services provided by venture capital investors, see, for example, Gilson RJ, Black BS (1998); OECD (2015c) paragraphs 349 – 351. See also Ibrahim DM (2015) pp 591 – 592 on how most startups probably still need both an investor's cash and value-added services.

16 Richard Henderson, Cash-strapped US companies ramp up sales of discounted shares. Listed businesses raise $17bn so far this year from cut-price sales to private equity groups. Financial Times, 14 April 2020.

17 See, for example, Hill J (2021) section 2.1 p 20 on founders; Macey JR, Miller PP (1995 – 1996) p 81 on blockholders: "In Germany and Japan, large block shareholders take an active management role to mitigate managerial shirking and misconduct. By contrast, the American structure of corporate governance largely focuses power in management, particularly in the chief executive officer. For this reason, American shareholders are relatively powerless to affect management decisions ..."

Third, stock exchanges can provide ancillary services to non-financial issuers. For example, an issuer can use stock exchanges to signal its own quality or the quality of its securities, or, for marketing purposes, to signal the quality of its products. Since a stock exchange listing comes with a regulatory regime, an issuer can use a stock exchange listing for governance purposes. A listing can also be used for the purpose of creating new kinds of incentives for managers.

Finally, the role and nature of stock exchanges has changed over time for issuer-firms. Stock exchanges play a role in the way the governance of listed companies is organised.[18] Stock exchanges used to play an important role as rule-makers, but this function has to a large extent been replaced by mandatory provisions of law and government regulation. The existence of stock exchanges makes it easier for listed companies to use their shares as a means of payment in mergers and acquisitions, and generally for acquirers to take over companies. However, firms do not issue shares to raise much cash on stock exchanges, the two largest sources of funding for mature companies being retained earnings and debt.[19] According to The Economist, a newspaper, "[l]istings these days mostly happen to enable early investors and employees with stock options to cash out".[20]

Entrepreneurs, family and friends, financial investors. Investors have different needs and use stock exchanges for different purposes.[21]

In young companies that apply for a stock exchange listing, the listing may provide an exit alternative or a chance to reduce investors' risk exposure.[22] Shareholders in such companies may include entrepreneurs, family members, the firm's employees, and the firm's financial investors.

Financial investors use stock exchanges as a marketplace for investments ranging from short-term speculation to takeovers. A listed company is in the market for control[23] and for sale unless it has put in place adequate structural take-over defences.[24] The number of listed companies has been reduced by mergers and takeovers. Many listed companies have been taken over in private equity deals or intra-industry transactions.

Traders, exchange members, and operators of exchanges. Traders, exchange members, and exchanges operators have their own interests.

18 Holmström B (2015) p 6.
19 *Ibid.*, p 7.
20 The Economist, NOIPO? 16 May 2019.
21 See, for example, Blume ME (2000).
22 Holmström B (2015) p 7.
23 Manne HG (1965).
24 Mäntysaari P (2010c) Chapter 18.

Traders can benefit from informational advantages and arbitrage opportunities.[25] High-frequency traders (HFTs) in particular try to benefit from one-sided liquidity that facilitates front running.

If the stock exchange has members, members can act as gatekeepers and sell services to investors that wish to trade on the exchange. Market makers can provide liquidity to the market provided that trading spreads enable them to make a profit.

The operators of stock exchanges have their own distinct interests. While the stock exchanges of the past were mutual associations, the operators of modern stock exchanges are for-profit corporations. Traditional stock exchanges face competition not only *inter se* but even from alternative trading venues. It can be difficult to draw a line between stock exchanges and other marketplaces for stocks: "The rivalry between exchanges and other marketplaces for stocks, bonds, or commodities is as old as the exchanges themselves, because only the physical and temporal concentration of the trading at the exchanges leads to a separation of the market into exchanges and other venues."[26] The most influential exchange operators now focus on high volumes, diversification, and the sale of data and technology services.[27] They have also acquired financial-data service companies.[28]

Choice of interests in the regulation of stock exchanges. What we can see is that a stock exchange is the hub of many conflicting interests. The existence of conflicting interests matters a great deal. The intended role of stock exchanges depends on the choice of societal interests and is therefore a question of values. The prevailing values and societal interests will influence markets and societal outcomes through regulation.

Different societal interests have influenced the nature and regulation of stock exchanges in the past.[29] After the period of industrialisation that triggered a wave of new stock exchanges, the interests of issuer-firms do not seem to have played any major role in the evolution of stock exchanges or their regulation. The emergence of alternative trading venues, broker-dealer order internalisation, and

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25 Holmström B (2015) p 2.

26 Fleckner AM, Hopt KJ (2013) pp 554–556.

27 See, for example, The Economist, Big fish, 29 August 2020.

28 The Economist, Go figure, 5 December 2020. The article describes how S&P Global acquired IHS Markit for $44bn, the London Stock Exchange (LSE) bought Refinitiv (the former financial-data service of Thomson Reuters) for $27bn, and ICE bought Ellie Mae for $11bn.

29 Compare Weber M (1894): "Wir sehen: die wesentliche Grundlage und die Einrichtungen der Börsen müssen in der Hauptsache gleichartige sein, weil die Bestimmung der Börse überall dieselbe ist."

dark pools in recent decades does not seem to have been driven by the interests of issuer-firms.

If the interests of issuer-firms do not matter, exchange regulation is likely to reduce the number of firms that choose public markets regardless of whether existing regulation is perceived as efficient or not in the current scholarly discourse.

The emergence of SME exchanges may be an exception to the long-term trend of the fading relevance of the interests of issuer-firms. However, SME exchanges basically are traditional stock exchanges rather than alternative trading venues. The mechanisms and regulation of traditional stock exchanges are designed for large mature companies with liquid stocks rather than SMEs with illiquid stocks.

Liquidity, concentration and fragmentation. Ensuring liquidity has played an important role in the business and regulation of stock exchanges. In the history of stock exchanges, ensuring liquidity used to require concentration. Concentration tends to be increased by the existence of positive network effects. In recent years, however, the trend has changed from concentration to the fragmentation of trading and marketplaces. The existence of so many stock exchanges and alternative trading venues in the world cannot fully be explained by the existence of national business clusters, national markets, national laws, and strict regulatory frameworks for stock exchanges in different countries. The reasons even seem to include, first, the fact that facilitating trading has become a commodity with various kinds of exchange operators competing for trading volume and, second, the fact that "liquidity" means different things for different market participants. Focusing on "liquidity" in the regulation of stock exchanges in the digital era primarily seems to have meant fostering the interests of high-volume traders or high-frequency traders.

Externalities. The current regulation of stock exchanges has externalities. For example, rules that facilitate the business of high-frequency traders (HFTs) can allocate wealth from all other traders to HFTs.[30] Rules designed to lower transaction costs for investors in the short term can reduce spreads, hamper market-making, and ultimately reduce the number of small-company IPOs.[31] In company law, corporate governance rules designed to reduce agency costs for the fictive shareholders of neoclassical economic theory can hamper the business of real firms, reduce the number of listed companies, and limit the investment

30 For the role of exchanges in high-frequency trading, see Kirilenko AA, Kyle AS, Samadi M, Tuzun T (2017); Baron M, Brogaard J, Kirilenko A (2012); Clark-Joseph AD (2013); Lewis M (2015).
31 Weild D, Kim E, Newport L (2013) p 4.

opportunities of retail investors. Current regulation seems to have contributed to the decline of IPOs.

About this Chapter. What is striking in this Chapter is how little the interests of issuer-firms have mattered. There is a fundamental flaw in the regulation of stock exchanges if the goal is to increase the number of companies with publicly-traded shares.

In this Chapter, we will focus on the evolution of stock exchanges and their regulation. First, for a better understanding of the context, we will have a brief look at the long history of stock exchanges (section 3.2). There is plenty of literature about the history of exchanges.[32] Second, we will study the emergence of alternative venues (section 3.3). Third, we will study broker-dealer order internalisation and dark pools in EU and US law (section 3.4). Order internalisation and dark pools are growing alternatives to traditional stock exchanges. Fourth, we will study the emergence of SME exchanges (section 3.5).

3.2 The History of Stock Exchanges

3.2.1 General Remarks

A stock exchange is a particular kind of marketplace. The characteristic aspects of stock exchanges have varied over time. We can have a brief look at the evolution of stock exchanges and try to sum up centuries of innovation.

For much of history, firms have mainly relied on borrowing to raise the bulk of funds from outsiders. Traditionally, it has been easier to establish viable markets for debt securities than for equity securities.[33] While large-scale impersonal capital markets began by trading in low-risk public debt instruments,[34] large-scale public markets for common stocks grew after the First World War.[35]

Early stock exchanges were marketplaces initiated by traders. Stock exchanges enabled traders to buy and sell shares. With industrialisation, stock exchanges came to be perceived as a channel for firms to raise capital by issuing

32 Christiansen H, Koldertsova A (2009) p 210: "Ever since the first demutualisation of an exchange (Stockholm in 1993) studies of listing, competition, consolidation and internationalisation of exchanges has become a rapidly growing industry."

33 Baskin JB, Miranti PJ Jr (1997) pp 14, 98 and 131.

34 *Ibid*., p 18.

35 *Ibid*., pp 14 and 176.

shares to the public. The importance of liquidity was recognised at the end of the nineteenth century.[36]

But circumstances changed. Stock exchanges needed to grow bigger after the liberalisation of capital movements,[37] the introduction of greater freedom to provide cross-border services,[38] increasing financialisation, and digitalisation. Larger scale helped to bring down transaction costs.

After the focus on scale, the nature of stock exchanges changed again. The operators of stock exchanges began to regard stock exchanges as business ventures. Exchange operators turned into conventional firms that were in the business of the operation of marketplaces to make a profit. To increase profits, they diversified into the operation of marketplaces for other financial instruments or commodities and into the provision of various kinds of financial, data and technology services.

3.2.2 Early History

Historically, it has been difficult to distinguish between stock exchanges and other marketplaces. The inherent vagueness of the notion of a stock exchange lives to this day. There can be different notions of a stock exchange. This has influenced regulation as well.[39]

Markets and fairs. There were regular markets and fairs in antiquity.[40] Markets and fairs developed when, with increasing specialisation in society, people needed to exchange their goods and the goods needed to be examined before

36 Lagneau-Ymonet P, Riva A (2019).

37 The Code of Liberalisation of Capital Movements has provided a framework for the liberalisation of capital movements between OECD countries since 1961. The Maastricht Treaty, which entered into force in 1994, introduced the free movement of capital as a Treaty freedom. Article 63 of the TFEU prohibits all restrictions on the movement of capital and payments between Member States, as well as between Member States and third countries.

38 The purpose of the Financial Services Action Plan (FSAP) was to create a single market for financial services within the EU by the end of 2004. The cornerstone of the FSAP was the Markets in Financial Instruments Directive 2004/39/EC (MiFID).

39 See, for example, Köndgen J (1998) pp 224–227; section 3(a)(1) of the Securities Exchange Act of 1934: “The term ‘exchange’ means any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange.”

40 See Fleckner AM, Hopt KJ (2013) pp 524–525.

trading.[41] The location and duration of markets and fairs were influenced by the available means of transportation, the occurrence of gatherings for religious or other reasons, and safety. There was also competition for business and wealth between different towns or regions.[42]

Modern markets are digital platforms. There are different kinds of digital platforms outside stock markets. A digital platform can be: a distribution channel for the sale of the operator's goods or for the provision of the operator's services; the functional equivalent of a department store with the operator buying and selling goods; an online platform enabling exchanges between sellers and buyers; or an online platform enabling peer-to-peer exchanges in the sharing economy. Online platforms with third-party buyers and sellers are the most important markets in digital economy.[43] Operators of online platforms generally rely on other people's assets, that is, their intellectual activities (Google), their relationships (Facebook), their goods (Ebay), their private physical assets (Uber), and so forth. The operator of an online platform tries to benefit from positive network effects and monopolise existing or new markets.

The founding of stock exchanges. Regular markets and fairs led to the emergence of venues with standardised trading. The first venues with standardised trading appeared in the Middle Ages, starting the history of commercial exchanges.[44] The difference between markets and fairs on one hand and commercial exchanges on the other related to settlement: "[A]ccording to the accepted usage on the bourses, articles need not be exhibited to the buyer at the time the contract is made, whereas the customary procedure at fairs and markets is different."[45]

The Amsterdam Stock Exchange was the first official exchange.[46] It was created in 1602 when Verenigde Ostindische Compagnie, the Dutch East India Company, decided to issue shares to finance its activities and needed an exchange to organise trading in its stocks and bonds. Generally, however, the initiative to create commercial exchanges of the first wave primarily came from traders.[47]

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41 Wiener FA (1905) § 1 p 2.

42 For example, the fairs of Lyon started to compete against the fairs of Geneva in the 15th century.

43 Van Alstyne MW, Parker GG, Choudary SP (2016).

44 Wiener FA (1905) § 4; Fleckner AM, Hopt KJ (2013) p 525. Fleckner and Hopt list the first commercial exchanges as follows: Bruges (1409), Antwerp (1460), Lyon (1462), Amsterdam (1530), Toulouse (1546), Cologne (1553), Hamburg (1558), Nuremberg (1560), Rouen (1566), London (Royal Exchange, 1570), Frankfurt (1585), Danzig (1593), Lübeck (1605), Königsberg (1613), Bremen (1614), and Leipzig (1635).

45 Vidal E (1910) p 5 on French commercial law.

46 European Central Bank (2007).

47 Fleckner AM, Hopt KJ (2013) p 525.

While the exchanges of the first wave owed their existence to the initiative of traders, the exchanges of the second wave were driven by the mercantilist interests of the state. They were established and regulated by the state.[48] This was the case with the bourses in Paris (1639/1724), Berlin (1685/1739), and Vienna (1771).[49] The state had its own particular objectives in this context: "In historical perspective, state ownership of exchanges served the following two functions. (1) Governments had an interest in organizing a liquid secondary market in government securities. (2) Governments were interested in keeping a hand on a market which appeared as particularly vulnerable to fraud and manipulation by single market participants."[50]

The third wave of exchanges followed industrialisation. This wave was fuelled by the funding needs of firms and the business interests of traders. The London Stock Exchange (1773) and the New York Stock Exchange (1792) belong to this group.[51] 1773 was the year when brokers decided to form a club and open a formal Stock Exchange in London. Informal trading in London has longer roots, and traders had already persuaded Parliament to pass a clause preventing unchartered companies from forming. The start of the NYSE in 1792 meant 24 brokers trading a few stocks on Wall Street.[52]

The founding of exchanges was followed by the era of mutual stock exchanges. Typical stock exchanges were mutual associations owned by their members and operated on a not-for-profit basis. This was a successful organisational paradigm in the circumstances.[53]

Mutuality influenced the way different stock exchange functions were organised. For example, the official markets of the Paris Bourse were operated by the Compagnie des agents de change in the second half of the nineteenth century. There were 60 agents from 1816 to 1898. All the agents were collectively responsible for the debts of any one of them and for the contracts made by any one of them on behalf of a seller.[54] In other words, what would now be called a central counterparty function was allocated to the collective of agents. Moreover, traders negotiated directly with each other, and prices were quoted and changed by

48 *Ibid.*, p 528.
49 Köndgen J (1998) p 228 – 230; Fleckner AM, Hopt KJ (2013) p 528.
50 Köndgen J (1998) p 241.
51 Fleckner AM, Hopt KJ (2013) p 533.
52 Mishkin FS, Eakins SG (2012) p 344. For the early history of NYSE, see Sylla R (2005).
53 Macey JR, O'Hara M (2005) p 572. For the Paris Bourse in the second half of the nineteenth century, see Walker DA (2001) pp 189 – 190.
54 Walker DA (2001) p 189.

them.[55] This meant that the matching of orders and price discovery were allocated to traders rather than centralised. A degree of 7 October 1890 required that prices bid and asked for transactions for cash be written down in a special register and displayed. This led to the establishment of an "opposition service" in the cash market operated by the agents' clerks. In other words, the function of the dissemination of pre-trade information was allocated to the agents' clerks.[56]

The stock exchanges of these early waves hardly faced any competition. They were national or regional monopolies.[57] This said, official markets could be complemented by unofficial markets. For example, in the second half of the nineteenth century, the official market of the Paris Bourse was complemented by an unofficial market called the coulisse. Agents therefore did not have a monopoly.[58]

Cross-border trading in shares was constrained by the available communication technology and limited by barriers to international capital movements.

Clearing and settlement. Increasing trading volumes made it necessary to centralise clearing and settlement functions.

The first organised securities clearing system was established in Frankfurt am Main in 1867. Other leading exchanges soon adopted the same practice in continental Europe. In the US, the first successful system was that of the Philadephia Stock Exchange. It began clearing in 1870.[59]

Before 1892, the NYSE had no centralised clearing. All deliveries of shares and checks between brokers as well as between brokers and banks were handled individually by the parties. Since transactions required certifications from banks, banks had a high workload. According to Parker, "it was the threat of the bankers to shut down on certifications that finally induced the Exchange to institute a system of reducing totals to balances before settling".[60] The NYSE established the Stock Clearing House in 1892.[61]

55 *Ibid.*, p 194.
56 *Ibid.*, p 201. For post-trade information, see p 204.
57 Macey JR, O'Hara M (2005) p 567.
58 Walker DA (2001) pp 189 – 191.
59 Parker W (1920) pp 16 – 17; Teweles RJ, Bradley ES (1998) p 317.
60 Parker W (1920) p 15.
61 *Ibid.*, p 16.

3.2.3 Technology and the Move Towards Competition

The available technology has always had an impact on trading practices. Technological advancement has had a critical impact on stock markets since the mid-nineteenth century.[62] Early exchanges were designated physical locations where traders would meet at fixed times, because trading required visual and verbal interaction.[63] The early exchanges were local, because trading participants had to be in the same place at the same time.

There were many local exchanges.[64] At the turn of the millennium, most registered exchanges still operated floor-based systems with human intermediation of trading.[65]

However, there was a gradual move towards competition between exchanges. The emergence of competition between national exchanges coincided with advances in communications technology.[66]

This can be illustrated with the long history of the New York Stock Exchange (NYSE). Originally, the number of traders was small, the trading volumes were low, and the NYSE used call auctions. At the time, call auctions would not have been possible without the physical presence of traders in the same place at the same time.[67] The NYSE ran a daily call auction for listed stocks from 1817 to 1869. In the late 1860s, it had to adopt continuous auction trading as a means of accommodating larger numbers of stocks and traders in a single physical location.[68] Sobel has described the NYSE's auction trading system as follows: "Prior to the Civil War, the Exchange had conducted its business through auctions ... Sellers would deposit their securities with the president prior to the auction, while buyers would await the call, and then bid against one another. This method suited small markets of the late eighteenth century, and so was carried over into the nineteenth. When business became hectic – such as after the discovery of gold in California in 1848, when mining shares were the rage – the

62 Domowitz I, Steil B (2002) p 315.
63 Steil B (2002a).
64 Fleckner AM, Hopt KJ (2013) p 535: "Prussia had the greatest influence on the development of German law in general and on stock exchange law in particular."
65 Domowitz I, Steil B (2002) pp 315–316.
66 *Ibid.*, p 315.
67 Steil B (2002a).
68 Domowitz I, Steil B (2002) p 315; Schwartz RA (2001): "On May 8, 1869, the call procedure was abandoned when the NYSE merged with a competing exchange, The Open Board of Brokers, and became a continuous trading environment."

Exchange would add a second auction. Sometimes this did not serve speculators and investors, who would gather near the Exchange to trade 'between calls'."[69]

The spread of telegraph technology reduced the need for independent centres of price formation and increased the dominance of the NYSE. Continued advances in communications technology led to further decline in the number of stock exchanges in the US, from over one hundred at the end of the nineteenth century to twenty-two in 1935, and only seven in 2002.[70]

At the turn of the millennium, the basic structure of the NYSE's floor trading largely was the same as it had been since the 1870s.[71] The nature of stock exchanges soon changed due to technological advancement.

It had become possible to match buy and sell orders on computer systems. Floor-based systems[72] could be replaced by automated auctions that could attract an unlimited number of participants, remove geographical constraints, allow much higher trading volumes, and make it possible to develop new customised services.[73] It is characteristic of automated systems that they either eliminate the intermediation of orders between the investor and the trading system (the brokerage function) or reduce it to ensuring that the investor has the requisite funds to buy or securities to sell (the electronic credit risk control function).[74] First introduced in 1969, the continuous electronic auction market became the most common architecture for automated trading.[75]

This increased competition between stock exchanges. It was possible for issuers to apply for a listing in the home or host country, or multiple listings on several stock exchanges in the same country or different countries. Both issuers and investors asked for more liquid markets and lower costs. It could be achieved by increasing trading volumes and the number of issuers, by developing more attractive computer systems, and by adopting new exchange rules.

Moreover, alternative venues of trade execution began to compete with traditional exchanges. These venues competed on price and attracted price-con-

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69 Sobel R (1977) p 28.

70 Domowitz I, Steil B (2002) p 315.

71 *Ibid.*, p 316.

72 See, for example, Hardy CO (1939/1975) p 1: "On all of the important American stock exchanges the standard method of trading is through oral bids and offers made on the floor of the exchange, for blocks of stock of a specific size, which are known as 'round lots.'"

73 Allen H, Hawkins J, Sato S (2001) p 30.

74 Domowitz I, Steil B (2002) p 316.

75 *Ibid.*, p 315.

scious institutional investors with large trading volumes.[76] The relative weight of institutional investors had grown (section 2.4.12).

3.2.4 Market Liberalisation

In addition to technology, the most important drivers of competition between exchanges in the second half of the twentieth century were integration, market liberalisation,[77] and the creation of innovative financial instruments.[78] In Europe, market liberalisation and increasing competition between stock exchanges were facilitated by the work of the OECD and by the regulatory framework of the internal market.

The OECD contributed to an increase in cross-border capital movements and investment. OECD members gradually liberalised cross-border capital movements. When the OECD was formed in 1961, it adopted two Codes of Liberalisation, namely the Code of Liberalisation of Capital Movements and the Code of Liberalisation of Current Invisible Operations.[79] According to the Code of Liberalisation of Capital Movements, OECD members "shall progressively abolish between one another ... restrictions on movements of capital to the extent necessary for effective economic co-operation".[80] Such "measures of liberalisation" cover both international direct investment and operations in securities on capital markets.[81] Under the Code, an adhering country has a right to benefit from the measures of liberalisation of other adhering countries regardless of its own degree of openness.[82] The Code prohibits discrimination.[83]

European integration increased cross-border capital movements in an internal market. The Treaty of Rome (the EEC Treaty, 1957) prohibited discrimination on grounds of nationality, liberalised the cross-border provision of services, and provided for the freedom of establishment. The internal market took a big step forward after the signing of the Treaty on European Union in Maastricht (the

76 Gadinis S, Jackson HE (2007) pp 1258 – 1259.
77 Fleckner AM (2006) p 2566: "The critical determinants are deregulation, technology, and globalization."
78 Christiansen H, Koldertsova A (2009) p 221: "In addition to the obvious effects of demutualisation and listing of exchanges, a rapid improvement in information technology and the creation of innovative financial instruments have also been among the key factors."
79 See OECD (2011). For the role of the IMF, see Chwieroth JM (2010).
80 Article 1(a) of the OECD Code of Liberalisation of Capital Movements.
81 *Ibid.*, Annex I.
82 *Ibid.*, Article 8.
83 *Ibid.*, Article 9.

EU Treaty, 1992). The Maastricht Treaty introduced the free movement of capital as a Treaty freedom.[84] The European Commission's Financial Services Action Plan (the FSAP) had as its object the creation of an integrated capital market by 2005. The FSAP consisted of an ambitious programme of rules for the financial industry[85] based on the principles of non-discrimination, mutual recognition, one-stop shop, and home country control. The introduction of the Investment Services Directive (ISD)[86] made it possible for EU-based investment firms to provide services in other Member States (host countries) after obtaining a home country authorisation.[87] It was no more necessary for an investment firm to be physically present in a host country for trading purposes. The ISD increased cross-border price competition between exchanges. To reduce costs, exchanges invested in electronic trading systems and increased economies of scale through exchange mergers and the combination of equity and derivatives markets.[88] – Treaty provisions have now been consolidated in the Treaty on European Union and the Treaty on the Functioning of the European Union (the TEU and TFEU, 2012).[89]

Moreover, there was increasing convergence of the regulation of exchanges and capital markets between the EU and the US. In the US, the Glass-Steagall Act was repealed in 1999, increasing the size of US banks and making them more competitive in the domestic and global marketplace. The extraterritorial reach of the Sarbanes-Oxley Act of 2002 made it necessary for the EU to align European regulation with that of the US.[90] The European Commission's 2003 Company Law Action Plan[91] focused on corporate governance, among other

84 Today, Article 63 of the TFEU prohibits all restrictions on the movement of capital and payments between Member States, as well as between Member States and third countries.

85 See, for example, Moloney N (2004).

86 Council Directive 93/22/EEC of 10 May 1993 on investment services in the securities field (ISD).

87 See, for example, Warren MG (1994); Demarchi M, Foucault T (2000).

88 Demarchi M, Foucault T (2000).

89 The geographical area of European market integration is larger than the EU. The rules facilitating an internal market were adopted by the members of the European Free Trade Association (EFTA). The legal framework facilitating the integration of the EEC and EFTA created the European Economic Area (EEA Treaty, 1993). Most EFTA countries have joined the EU and the EFTA consists of just four countries at the time of writing. Iceland, Lichtenstein, Norway, and Switzerland are EFTA members that have not joined the EU. The UK is a former EFTA member. The UK decided to leave the EU in 2020.

90 See, for example, Mäntysaari P (2005) section 3.2.3.

91 Modernising Company Law and Enhancing Corporate Governance in the European Union – A Plan to Move Forward. Communication from the Commission, COM(2003) 284 final.

things.[92] The 2009 Pittsburgh agreement of G20 leaders focused on OTC contracts.[93] The general regulatory goal of the Pittsburgh agreement was to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse.[94] In banking, the Basel Committee on Banking Supervision produced a framework to strengthen the regulation, supervision and risk management of the banking sector. The most recent Basel framework is called Basel III.

The approximation of the regulation of capital markets and financial services in the EU and the convergence of regulation in the EU and the US were followed by the increased internationalisation of the financial industry. In the EU, new rules facilitated the provision of cross-border financial services, the establishment of branches and subsidiaries in other Member States, as well as cross-border mergers and acquisitions. The launch of the euro abolished currency risk in the euro area and accelerated the shift from country-based portfolio management to international sector-based investment.[95]

3.2.5 Demutualisation, IPOs and Concentration

The basis of mutual stock exchanges gradually eroded due to the emergence of competition between exchanges. Not all stock exchanges survived as autonomous entities. The stock exchanges that survived had chosen to act as normal commercial enterprises (firms) after demutualisation.[96] Moreover, they became listed companies with their own market investors.

92 Hopt KJ (2019a) II.3(c): "As to the content of the Action Plan, which follows the recommendations of the High Level Group almost completely, six broad areas are covered: (1) corporate governance; (2) the raising and maintenance of legal capital; (3) groups of companies; (4) restructuring; (5) new European company forms, such as the European private company as well as other enterprise and foundation forms; and (6) transparency of national legal forms. The main concern of the Commission is certainly corporate governance. This is a remarkable shift from classical company law to corporate governance, though upon closer examination key company law problems have been tackled in the Action Plan in a functional, modern way."

93 Recital 5 of Regulation 648/2012 (EMIR).

94 In the US, derivatives regulation was strengthened by the Dodd–Frank Wall Street Reform and Consumer Protection Act. In the EU, it was done by Regulation 648/2012 (EMIR). See recitals 7 and 8 of EMIR.

95 Steil B (2001) p 335.

96 For demutualization generally, see Fleckner AM (2006) p 2542. For demutualization in the US, see Fleckner AM (2006) pp 2557–2558. For the interests of firms generally, see Mäntysaari P (2012) Chapter 4; Mäntysaari P (2017) section 7.5.5. For the sources of revenues of stock exchanges, see Fleckner AM (2006) pp 2549–2550.

Demutualisation. The drivers of competition acted as drivers of demutualisation. Generally, growing inter-exchange competition should have the effect of increasing the prevalence of for-profit exchanges.[97] Since the fundamental driver was competition for global order-flow, demutualisation spread from developed markets to emerging markets.[98]

Demutualisation meant more than replacing a mutual association that operated an exchange with a limited-liability company doing the same thing. This was because of the different economics of the business of mutual associations and automated auction trading, and because of the resulting governance problems of mutual associations. The introduction of limited-liability companies as exchange operators changed the business of exchange operators.

The traditional model of an exchange used to be a locally organised mutual association. It was a remnant of the era before trading system automation when access to the exchange had to be rationed to prevent overcrowding, and when exchanges as cooperatives were naturally run by the traders themselves.[99] These mutual associations charged membership fees, and the value of an exchange derived from the physical presence of traders.[100] Over time, the actual costs of running the exchange were largely shifted to listed companies, leaving the members free to extract rents.[101]

In contrast, access to computer systems does not have to be limited to a certain location or by the number of access points. Since the marginal cost of adding a member to a trading network declines towards zero, fixed access costs (membership fees) tend to be replaced by variable costs (transaction-based charging). This makes the operation of an electronic auction system more like the provision of a normal for-profit service.[102]

The traditional business model of mutual associations thus had significantly higher trading costs to investors and higher capital costs to listed companies.[103] This contributed to conflicts of interest between the exchange and its traditional members as well as between its members *inter se*.

Conflicts of interest between the exchange and its traditional members were caused by four things. First, to survive, the operators of stock exchanges turned into normal commercial firms that treated exchanges as normal commercial

97 Hart O, Moore J (1996); Steil B (2002a).
98 IOSCO (2005) pp 6–7.
99 Steil B (2002a).
100 *Ibid.*
101 Macey JR, O'Hara M (2005) p 572.
102 Steil B (2002a).
103 Steil B (2001) pp 332–333.

business assets. The operators of stock exchanges became firms that provided technology and information services to customers. Second, the threat of competition forced each exchange operator to invest in an electronic trading system. Each operator tended to build its own proprietary system.[104] Third, these electronic auction systems were regarded as service platforms that could be made available to new customers. For the operator of an exchange, large investments in an electronic trading system would not have been meaningful without the prospect of increased trading and fees through organic growth, licensing, and mergers. Fourth, traditional brokers had an incentive to block this development to protect their own business interests.

The primary function of demutualisation was to reduce the control of intermediaries over the strategic positioning of the exchange.[105] In a mutual association, exchange members derive profits from intermediating non-member transactions. Investors and issuing companies can suffer significant economic costs from inefficient trading structures and excess intermediation.[106] Trading volumes can be increased by reducing these costs.[107] A major economic benefit of automated auction trading is the elimination of the need for such trade intermediation.[108] Because of conflicts of interest, mutual associations could have difficulties introducing automated systems and allowing their full potential to be exploited by non-member investors.[109] For example, it was typically the smaller members, such as floor brokers on the NYSE or the hoekman (specialists) on the Amsterdam Stock Market, that had the most to lose and therefore resisted demutualisation.[110] The largest UK-based market makers of the London Stock Exchange fought to block the adoption of electronic auction trading as late as in the mid-1990s.[111]

There were also conflicts of interest between local exchange members that did not want a change and large international trading houses that did. While locals had "a strong incentive to maintain institutional barriers to disintermediation of their services", larger international players tended to see the introduction

104 *Ibid.*, pp 340 – 341.
105 Steil B (2002a).
106 Steil B (2001) pp 332– 333 and 341.
107 *Ibid.*, p 342.
108 *Ibid.*, p 332.
109 Steil B (2002a).
110 Ferrell A (2007) p 8
111 Steil B (2002a); Steil B (2001) p 332.

of trading automation and a governance reform as "an effective weapon for increasing their strategic control of the exchange vis-à-vis the locals".[112]

Moreover, there were conflicts of interest between international players and local exchanges. International players were members of numerous exchanges and had to pay multiple membership fees. They were in favour of consolidation for various reasons. The direct costs of multiple memberships could be reduced by making stock exchanges merge.[113] Cross-border settlement costs could be reduced by consolidating systems or through cross-border exchange mergers.[114] The costs of each stock exchange and each membership could be reduced by consolidating the trading systems. It made no economic sense to build separate and unique trading systems for exchanges that applied the same market architecture: "With few exceptions, fledgling exchanges should find it most cost-effective to buy, lease, or pay for access to trading and settlement systems already in operation elsewhere."[115] Large international trading houses that were members of many stock exchanges could also increase their control of an exchange through demutualisation and mergers.

The development of demutualised, commercial, and for-profit system operators became the norm.[116] The first stock exchange to demutualise was the Stockholm Stock Exchange in 1993.[117]

Stock exchange IPOs. Obviously, stock markets needed a new governance model to solve the conflict between the interests of the operator of the stock exchange and the interests of its members. There were even other reasons to improve the governance model. The nature of the business required faster and better decision-making processes supported by a more efficient corporate governance model. This required more than the mere choice of the business form of a limited-liability company.

After the demutualisation of the exchange, earlier member firms still held significant share blocks in the operator of the stock exchange. The reorganisation of exchanges as limited-liability companies was complemented by initial public offerings (IPOs) and self-listings.[118] The self-listing of the operator of the stock exchange made it possible for non-members to buy equity stakes in the exchange operator, facilitated a more dispersed share ownership structure, and helped to

112 Steil B (2002a).
113 Steil B (2001) p 335.
114 *Ibid.*, p 335.
115 *Ibid.*, pp 340–341.
116 *Ibid.*, p 339.
117 IOSCO (2001) pp 21–22.
118 Macey JR, O'Hara M (2005) p 574 and Table 1 on pp 594–595; Köndgen J (1998) p 233.

separate the interests of the exchange operator from those of trading houses. This changed the incentive structure,[119] separated ownership from control,[120] and created a takeover market for exchanges.[121]

Whether exchange members were prepared to accept new investors tended to depend on "the degree of competition, or potential competition, which the exchange face[d], and the degree to which the largest member firms operate[d] internationally".[122] While the pioneer demutualisers operated in small and highly open national economies, there was a clear global trend towards exchange demutualisation and listing.[123] Most stock exchanges in OECD countries demutualised and self-listed.[124]

Concentration. After the demutualisation of exchanges and the IPOs of exchange operators, it was time to focus on scale and scope. Concentration is a question of scale. Diversification is a question of scope.[125]

The demutualisation of stock exchanges was followed by the question of scale, that is, the concentration of exchanges nationally[126] as well as through cross-border cluster-building[127] and mergers.

The concentration of exchanges was made much easier by self-listings.[128] It was now technically possible to make a public bid for shares in the operator of a stock exchange, and to merge exchange operators.[129]

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119 Steil B (2002a).

120 Fleckner AM (2006) p 2576.

121 Macey JR, O'Hara M (2005) p 574. For the market for corporate control generally, see Manne HG (1965).

122 Steil B (2002a).

123 Steil B (2002a): "It is not surprising that the pioneer demutualizers were three Nordic exchanges and Amsterdam. These exchanges operate in small and highly open national economies." For a list of stock exchanges to demutualise and go public, see, for example, Ferrell A (2007).

124 Christiansen H, Koldertsova A (2009) pp 219–220.

125 For the scale and scope of fund management companies, see Morley J (2014) p 1259.

126 Steil B (2001) pp 347–348: "Despite growing concern among European exchanges and regulators over ECNs and trading fragmentation, European share trading is actually more concentrated than it has been at any time over the past fifteen years (since the launch of London's SEAQ International)." Macey JR, O'Hara M (2005) p 567: "[E]xchanges have often enjoyed monopoly status whereby they are the only firm producing such exchange services, at least over some geographical or national boundary."

127 See Floreani J, Polato M (2013) p 182.

128 Ferrell A (2007) p 9.

129 Christiansen H, Koldertsova A (2009) p 255: "Stock exchange consolidation has been ongoing for decades, but the transformation of exchanges into listed companies has unleashed a new wave of mergers and acquisitions (M&A) – and has added a strong cross-border dimension. The

The concentration of exchanges was driven by the predominance of fixed costs, the existence of positive network effects with liquidity as an important goal,[130] and increasing regulation.

The high proportion of fixed costs and the low proportion of variable costs made running a stock exchange one of the best examples of economies of scale.[131]

There could be positive network effects, because each trader brought additional trading opportunities and liquidity, making the network more attractive and implying a tendency to consolidation.[132] Moreover, there could be positive network effects unrelated to liquidity. For example, location is seen as important for traders since "proximity allows for cheap and easy exchange of information with other traders, analysts and the sales force". This helps to explain why London experienced rapid growth in financial service employment between 2001 and 2006, while Amsterdam and Frankfurt experienced a gradual decline. Generally, a lot of financial work moved to the leading financial centres London and New York.[133]

Moreover, concentration was driven by increased use of clearing obligations, increased use of central counterparties, increased capital requirements

combination of NYSE and Euronext in 2006, Nasdaq's acquisition of the OMX and Bourse Dubai's investment in Nasdaq in 2007, Qatar's investment in the London Stock Exchange and the latter's merger with Borsa Italiana in 2007 provide just a few examples of the dramatic restructuring of the industry. Industry consolidation appears to be continuing, especially in North America and Europe."

130 Fleckner AM, Hopt KJ (2013) pp 554–556: "Until one decade ago, other marketplaces failed to win considerable trading volume from the traditional exchanges. The 'network effect' explains why: the more liquid a marketplace is, the lower the transaction costs are, and the lower the transaction costs are, the more attractive and thus more liquid the market is."

131 Fleckner AM (2006) pp 2577–2578: "Once an exchange has set up the trading facilities (such as floors and electronic systems), drafted the rules, formulated the corporate governance standards, and so forth, there are almost no further costs, regardless of the number of transactions performed at the exchange ... If two exchanges merge, they can almost halve most of their fixed expenses, like updating the trading system and reviewing their rules and corporate governance standards."

132 Allen H, Hawkins J, Sato S (2001) pp 33 and 37–38; Fleckner AM, Hopt KJ (2013) pp 554–556. See even Bagheri M, Nakajima C (2004) p 94 on exchanges as natural monopolies: "If exchanges are natural monopolies, i. e. there are economies of scope and scale in trading and settlement activities of the securities markets, then there is a question of how far the application of competition laws should be pursued."

133 Engelen E, Grote MH (2009) p 682.

for investment firms,[134] and generally by the increased regulation of exchanges. Regulatory compliance became one of the core competences of exchanges.[135] The cross-border consolidation of stock exchanges increased entry barriers by increasing the cost of regulatory compliance for new cross-jurisdictional entrants.[136]

The concentration of intermediaries increased the internal execution of client orders within investment firms. At the turn of the millennium, many large institutions were internalising between 15 – 30 % of client order flow in European jurisdictions that had not introduced the "concentration rule"[137] (section 3.3.3).[138]

3.2.6 Fragmentation and Diversification

Concentration was followed by fragmentation. At the turn of the millennium, digitalisation and network effects had contributed to the concentration of stock exchanges. Fragmentation had only had a limited impact on market structures.[139] Ten years later, the situation had changed. New rules had facilitated the emergence of alternative trading venues. Trading commissions were brought down by technological advancement and competition. New rules, new marketplaces, and technological advancement attracted high frequency traders.[140]

Fragmentation. The emergence of alternative trading venues increased the fragmentation of trading systems and reduced the efficiency of price forma-

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134 Section A of Annex I to Directive 2004/39/EC (MiFID) and Directive 2014/65/EU (MiFID II); Articles 4 and 16 of Regulation 648/2012 (EMIR).

135 Christiansen H, Koldertsova A (2009) p 220.

136 See *ibid.*, p 226.

137 Article 14(3) of Directive 93/22/EEC (ISD).

138 Proposal for a Directive of the European Parliament and of the Council on investment services and regulated markets, COM/2002/0625 final, section II.1: "The following technology-driven trends have transformed the financial trading landscape: 1. inter-exchange competition … 2. competition from alternative trading systems … 3. increased internal execution of client orders within investment firms … A diminishing balance of retail investor orders which cannot be executed internally is routed to exchanges for execution. This practice is well established in jurisdictions which have not introduced a 'concentration rule' …"

139 Steil B (2001) pp 347 – 348: "Despite growing concern among European exchanges and regulators over ECNs and trading fragmentation, European share trading is actually more concentrated than it has been at any time over the past fifteen years …" Fleckner AM, Hopt KJ (2013) pp 554 – 556: "Until one decade ago, other marketplaces failed to win considerable trading volume from the traditional exchanges. The 'network effect' explains why …"

140 Fioravanti SF, Gentile M (2011) p 5.

tion:[141] "Two examples illustrate the tremendous pace of change: At the end of 2005, it was a widely recognized event that the New York Stock Exchange's market share in the trading of securities whose issuer is primarily listed in New York dropped below 75 %, the lowest level since the beginning of the recording of this data three decades ago. Less than three years later, in summer 2008, the New York Stock Exchange's market share stood at a mere 25 %. The London Stock Exchange's market share in the United Kingdom fell between January and October 2008 from 96 % to 58 %, recovered in 2010 to some 62 %, before it dived below 50 % in 2011."[142]

In other words, traditional stock exchanges were "no longer the place where traders conduct most of their transactions".[143]

In 2010, the SEC described the US market structure as "dispersed and complex: (1) Trading volume is dispersed among many highly automated trading centers that compete for order flow in the same stocks; and (2) trading centers offer a wide range of services that are designed to attract different types of market participants with varying trading needs."[144]

In other words, the earlier oligopoly dominated by Nasdaq and the New York Stock Exchange was gone as far as trading was concerned.[145] According to a 2019 book, "any given [American] stock is potentially traded in each of almost seventy-five competing venues, including twelve exchanges and more than thirty dark pools".[146] Lewis wrote in 2015 that "the banks had managed to move 38 percent of the entire U.S. stock market now traded inside their dark pools" and that "[i]t is a façade that the market is interconnected".[147]

According to the SEC, "[a] primary driver and enabler of this transformation of equity trading has been the continual evolution of technologies for gen-

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141 *Ibid.*, p 5; Fleckner AM, Hopt KJ (2013) pp 555.

142 Fleckner AM, Hopt KJ (2013) pp 554–556. See also Gadinis S (2008) pp 317–318; SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section I.

143 Fleckner AM, Hopt KJ (2013) p 559.

144 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section I.

145 For IPOs, see Morrison & Foerster LLP (2017) pp 1 and 5: "[W]e examined the filings of (i) the approximately 680 EGCs (on an aggregated basis) that completed their IPOs in the period from January 1, 2013, through December 31, 2016, and (ii) the 100 EGCs (on a standalone basis) that completed their IPOs during the year ended December 31, 2016. [...] Of the 680 EGCs, all but two were listed on markets within the Nasdaq Stock Market ('Nasdaq') or the New York Stock Exchange (NYSE')."

146 Fox MB, Glosten LR, Rauterberg GV (2019) p 13. See also Gadinis S (2008) p 321; Lewis M (2015) pp 134–135.

147 Lewis M (2015) p 211.

erating, routing, and executing orders. These technologies have dramatically improved the speed, capacity, and sophistication of the trading functions that are available to market participants."[148] Moreover, the SEC explained that changes in market structure reflected "the markets' response to regulatory actions such as Regulation NMS, adopted in 2005, the Order Handling Rules, adopted in 1996, as well as enforcement actions, such as those addressing anti-competitive behavior by market makers in NASDAQ stocks."[149] Regulation NMS is generally regarded as a piece of regulatory action that "stimulated a huge amount of stock market trading".[150]

The emergence of a greater level of trading fragmentation in the US than in Europe was caused by a consolidated market data system, the "Order Protection Rule", and a greater centralisation of clearing flows in the US.[151]

The trend of fragmentation has not stopped. In 2019, some of Wall Street's largest brokers and banks gave their backing to Members Exchange or MEMX, a new stock exchange that aims to break the dominance of the New York Stock Exchange and Nasdaq by reducing the overall costs of trading. MEMX said it would offer lower pricing on market data, connectivity and transaction fees.[152]

Diversification. Fragmentation influenced the choice between the scale and scope of a stock exchange. Diversification is a question of scope. Demutualisation and the listing of stock exchanges were followed by the increased diversification of their business.[153] The drivers were increased competition[154] and the new nature of the stock exchange business.

148 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section I.

149 *Ibid*. See also Adrian J (2015–2016) p 257: "This fragmentation was further driven by SEC instituted regulations that were designed to foster competition between the exchanges after their privatization in 2005, known as Regulation NMS, or National Market System. SEC regulation spread the market out, while changes in technology ballooned the amount of trading and greatly increased the speed at which it could be done."

150 Lewis M (2015) pp 134–135.

151 Fioravanti SF, Gentile M (2011) p 14; Mahoney PG, Rauterberg GV (2018).

152 Philip Stafford and Nicole Bullock, Wall Street heavyweights back new exchange rival to NYSE, Nasdaq. Financial Times, 7 January 2019; Philip Stafford, BlackRock throws support behind US exchange start-up MEMX. Financial Times, 12 May 2020.

153 See how Deutsche Börse AG and London Stock Exchange Group are described in paragraphs 2–3 and 25–26 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange).

154 Christiansen H, Koldertsova A (2009) p 221.

Competition was intensified by a rapid improvement in information technology,[155] the creation of innovative financial instruments,[156] and the expansion of derivatives exchanges and commodities exchanges.

Market participants could trade in stocks by using functional equivalents to trading in stocks: "A holder of a portfolio of common stocks may, by selling an index futures contract, achieve the functional equivalent of selling off the stock and investing the proceeds in Treasury Bills or some equivalent instrument. Buying futures contracts when stocks are already owned in a portfolio is equivalent to margining that portfolio and selling short-term debt instruments and investing the proceeds in stocks."[157]

Therefore, stock exchanges had reason to regard derivatives exchanges and commodities exchanges as potential competitors. After the turn of the millennium, the largest derivatives exchanges were either already publicly-listed companies, or part of publicly-listed parent companies, or demutualised and went public.[158]

Exchanges were now increasingly seen as providers of various kinds of specialist services in competitive markets.[159] From the perspective of the operator of a stock exchange, its business did not need to be limited to what was regarded as the main of role of stock exchanges in the past: the matching of buyers and sellers of securities and the provision of a mechanism for price discovery.[160] Each firm could choose its own business model. The operators of stock exchanges became suppliers of technology and information services. In addition, they could provide the matching of bids, clearing, and settlement services.[161]

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155 See, for example, Lee R (1998) p 4; Baum H (2004) pp 680 – 681: "Instead of exchanges being natural monopolies, we are seeing a fierce competition between traditional exchanges and a plethora of newly developed electronic facilities offering various exchanges services. These platforms are increasingly making use of Internet technology."

156 Christiansen H, Koldertsova A (2009) p 221.

157 Friedland JH (1994) p 122.

158 Ferrell A (2007).

159 Bagheri M, Nakajima C (2004); Christiansen H, Koldertsova A (2009).

160 For the definition of an exchange in the US, see section 3(a)(1) of the Securities Exchange Act of 1934. For an example of the traditional view on stock exchanges, see Fleckner AM (2006) p 2546.

161 Ben Slimane F (2012); Bagheri M, Nakajima C (2004); Christiansen H, Koldertsova A (2009); Floreani J, Polato M (2010) p 30: "Since maintaining the competitive advantage in the securities industry depends on the ability of exchanges to strengthen their relations with clients, gaining access to a wide set of business areas qualifies as a strategic goal. As a result, major exchanges not only manage trade execution services but provide to users a wide set of services related to the investment in financial products." See also Regulation (EU) No 648/2012 of the European

The changing nature of the business of stock exchange operators can be illustrated with how Nasdaq, Inc. described its business in a SEC filing in 2019: "We are a leading provider of trading, clearing, marketplace technology, regulatory, securities listing, information and public and private company services. Our global offerings are diverse and include trading and clearing across multiple asset classes, trade management services, market data products, financial indexes, investment data and analytics, capital formation solutions, corporate solutions, and market technology products and services. Our technology powers markets across the globe, supporting equity derivative trading, clearing and settlement, cash equity trading, fixed income trading, trading surveillance and many other functions. We manage, operate and provide our products and services in four business segments: Market Services, Corporate Services, Information Services and Market Technology."[162]

Reduced relevance of listings. The changing nature of the business of exchange operators influenced the definition of the regulatory term "exchange" in the US (Regulation ATS)[163] and the EU (MiFID II).[164] Even the role of listings changed for exchanges.

Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories.

162 Nasdaq, Inc., Form 10-Q for the quarterly period ended March 31, 2019, Part I, Item 2.

163 SEC Release No. 34–40760 (Regulation of Exchanges and Alternative Trading Systems). Regulation ATS, section II.A: "A fundamental component of the new regulatory framework is new Rule 3b-16. This rule interprets key language in the statutory definition of 'exchange' under section 3(a)(1) of the Exchange Act. Rule 3b-16 reflects a more comprehensive and meaningful interpretation of what an exchange is in light of today's markets. Until now, the Commission's interpretation of the exchange definition reflected relatively rigid regulatory requirements and classifications for 'exchange' and 'broker-dealers.' Advancing technology has increasingly blurred these distinctions, and alternative trading systems today are used by market participants as functional equivalents of exchanges … The statutory definition of 'exchange' includes a 'market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange.' In response to commenters' concerns and suggestions, the Commission has carefully revised Rule 3b-16 to define these terms to mean any organization, association, or group of persons that: (1) brings together the orders of multiple buyers and sellers; and (2) uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of a trade."

164 See points (18)—(24) of Article 4(1) of Directive 2014/65/EU (MiFID II) defining the notions of "market operator", "multilateral system", "systematic internaliser", "multilateral trading facility" (MTF), "organised trading facility" (OTF), and "trading venue". A "trading venue" means a regulated market, an MTF or an OTF.

There are exchanges with listings of companies and exchanges without such listings. In the US, exchanges "can trade any stock, wherever it is listed; indeed few do listings at all".[165] Investors Exchange (IEX) is an example of a successful exchange that has no listings but in 2009 traded "6,000–7,000 stocks and exchange-traded funds each day, making it the world's seventh largest ecxhange operator by trading value".[166]

Reduced relevance of liquidity. The declining relevance of listings was accompanied by the changing relevance of liquidity. Liquidity obviously matters for investors. The role of liquidity for stock exchanges changed due to technological advancement and regulatory change. US regulatory changes reduced liquidity for institutional investors.[167]

The parallel trends of inter-exchange competition and competition from alternative trading systems contributed to the increased concentration of intermediaries and the internal execution of client orders within intermediaries.[168] While the functions of market intermediary and marketplace had historically been performed by distinct types of institution, the boundary between marketplaces and intermediaries became blurred after the turn of the millennium.

Moreover, the fragmentation of trading, the rise of dark pools, and the diversification of stock exchanges' activities made transparency and "liquidity" less important for stock exchanges.[169]

According to a study, the competitive advantage of a stock exchange is based on three factors: a) a diversified business model that reduces the volatility of its own revenues; b) governance arrangements that affect the incentives of the operator company's management; and c) large trading volumes and a large number of securities admitted to trading.[170]

Obviously, the profits of a stock exchange are higher if it has attracted more listings and the volume of trading is higher. A stock exchange can charge fixed fees for listings and variable fees for transactions. However, digitalisation has brought down fixed costs and transaction costs, and US regulation permits ex-

165 The Economist, Flash boys in the pan, 28 September 2019.

166 *Ibid*.

167 Gadinis S (2008) pp 315–316.

168 Proposal for a Directive of the European Parliament and of the Council on investment services and regulated markets, COM/2002/0625 final, section II.1.

169 See, for example, Fioravanti SF, Gentile M (2011) p 14: "Competition among trading venues can reasonably improve broker and institutional investor's operability because it brings down the average level of fees and because it enlarges exchange services offer. However, it is difficult to exactly quantify investor's net benefits because the spreading out of dark pools and high frequency trading could weaken market efficiency and could raise transparency issues ..."

170 Floreani J, Polato M (2010) p 32.

changes to trade any stock listed in the US. Stock exchanges have incentives to compete for trading volumes. The market trend is towards inequalities in trading options and heterogeneous pricing.[171]

In fact, there is a new revenue model in the US equities markets: "The predominant model that has emerged in the U.S. equities markets is the 'maker-taker' fee model, in which, on the one hand, a trading center pays its broker-dealer participants a per share rebate to provide (i.e., 'make') liquidity in securities and, on the other hand, the trading center assesses them a fee to remove (i.e., 'take') liquidity."[172] The maker-taker pricing model reflects the economics of two-sided network effects[173] and "originated on electronic communications networks (ECNs) in the late 1990s as ECNs attempted to attract order flow and draw liquidity from traditional exchanges by offering rebates to market participants that posted liquidity to their platforms."[174]

For example, until 2006, the NYSE operated as a not-for-profit enterprise that focused on listing companies and facilitating stock trading. It used to generate revenue mostly from listing and trading fees. In 2018, volume is critical for the NYSE. The NYSE pays rebates to high-frequency traders and brokers to place trades on the exchange. The NYSE charges HFTs for high-speed data feeds and the right to locate their computers in close physical proximity to the exchange's computers.[175]

The emergence of many alternative venues (section 3.3) indicates that liquidity is not the driving force in the development of stock exchanges.[176] This is even

171 Fleckner AM, Hopt KJ (2013) pp 554–556. See also Lewis M (2015).

172 SEC Release No. 34–82873 (Transaction Fee Pilot for NMS Stocks), section II.A.

173 Van Alstyne MW, Parker GG, Choudary SP (2016).

174 SEC Release No. 34–82873 (Transaction Fee Pilot for NMS Stocks), section V.A.1.

175 David Swensen, High frequency trading: NYSE is putting its own interest ahead of investors'. Financial Times, 12 August 2018. See also Rule 610T of Regulation NMS.

176 See, for example, Macey JR, O'Hara M (2005) p 565: "A particular thesis we develop is that shifts in transaction costs and agency costs have dictated changes in the optimal economic organization of trading. These changes have forced economic activity to migrate from a centralized market to multiple competing venues. We argue that these shifts, in turn, have changed the optimal ownership structure of exchanges, pushing exchanges away from a cooperative structure to a corporate structure." Fleckner AM, Hopt KJ (2013) pp 554–556: "It took some time until observers began to appreciate the negative consequences of the ongoing market fragmentation, such as heterogeneous pricing (instead of central price fixing at the exchange), intransparency (caused by 'dark pools' and other forms of hidden trading), or inequalities in the trading options (that give certain professional traders advantages over other investors)." Lewis M (2015) p 159: "Why didn't investors organize themselves to sponsor a single stock exchange entrusted with guarding their interests and protecting them from Wall Street predators?"

more so in Europe where competition was increased and trading on opaque markets fostered by MiFID II.[177] European markets are more fragmented than US and Asian markets: "The proportion of trading on 'lit venues' is much lower in Europe than in the US and Asia, which provides a clear indication of how fragmented and opaque markets are in Europe."[178]

3.2.7 Conclusion

The history of stock exchanges shows that the structure of stock markets is not written in stone. The long-term trend is structural change driven by technological advancement, the interests of financial intermediaries, and regulatory change. The interests of issuer-firms have mattered very little in this process. Failure to take into account the interests of issuer-firms could be one of the causes of low IPO levels. The evolution of stock exchanges does not stop here. In the next section, we can have a look at the function and regulation of alternative venues.

3.3 Alternative Venues in General

3.3.1 General Remarks

If stock exchanges are not designed with the interests of issuer-firms in mind, you might need alternative venues that work better for issuer-firms. But such alternative venues have not yet emerged. Most alternative venues have not been designed to benefit issuer-firms. SME exchanges may be the exception confirming the rule (section 3.5). This said, the evolution of the regulation of alternative venues can be relevant where the goal is to propose future regulation. It can help to understand what seems to be the problem and to what extent the current regulatory regime leaves room for new kinds of venues.

The emergence of alternative venues for trade execution can be illustrated with the history of the NYSE that even includes the specialist system, OTC dealers, odd-lot dealers, and adapting to Regulation NMS.

In the latter half of the nineteenth century, the NYSE was complemented by the specialist system and the Open Board that was organised by traders who had

177 FESE (2019) p 32.
178 *Ibid.*, p 33.

been excluded from the NYSE: "By 1866 some brokers took to stationing themselves at the centers of the various crowds, and would remain there throughout the day, dealing in only one stock. Would-be buyers and sellers knew who they were and would come to them for quotes. Thus was born the specialist system, the heart of the Open Board and a rival method to the auctions ..."[179]

The NYSE's specialist system had flaws that were revealed by block trades.[180] After the beginning of World War II, NYSE specialists were unable to help European investors and government sell large blocks of shares.[181] In the 1950s and 1960s, the number of block trades increased as institutions came to dominate trading.[182] OTC dealers filled the gap.[183]

Moreover, the NYSE'S market for "round lots" was complemented by a market for "odd lots".[184] On the NYSE, the bulk of the odd-lot trade was done for many years by three large dealer firms known as odd-lot houses.[185] An alternative could have been a secondary auction market with a 1-share unit of trading[186] or at least a small unit of trading.[187]

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179 Sobel R (1977) pp 28–29.

180 *Ibid.*, p 222. See also p 54: "The specialist system demonstrated an inability to wed block trading and public responsibility. This became evident when several institutions tried to unload their shares at the same time."

181 *Ibid.*, pp 72–73: "... shortly after the beginning of World War II, European investors and governments attempted to sell shares in American corporations in New York, so as to raise funds for their war efforts. They quickly found that N.Y.S.E. specialists, who had become overly cautious due to the depression, were unable to execute sales of 10,000 or so shares of U.S. Steel, Standard Oil of New Jersey, or General Motors, or if they could, wanted to do so at prices that were several points below the last recorded trade."

182 *Ibid.*, p 54.

183 *Ibid.*, pp 72–73.

184 Hardy CO (1939/1975) p 1: "On all of the important American stock exchanges the standard method of trading is through oral bids and offers made on the floor of the exchange, for blocks of stock of a specific size, which are known as 'round lots.' Orders for smaller quantities and less than round-lot remainders of larger orders, which are known as 'odd lots,' are not matched against one another in the auction markets, but are turned over to dealers who stand ready at all times to buy and sell at prices which are fixed automatically by the current round-lot price."

185 *Ibid.*, p 10. For the principles of the odd-lot dealer system, see pp 129–130.

186 *Ibid.*, p 132: "It would be possible to organize, alongside the round-lot market, a secondary auction market with a 1-share unit of trading in which bids and offers in odd lots would be matched directly against one other ... Undoubtedly, therefore, therefore, the commission rates per share would have to be considerably higher than they are at present. In the writer's opinion, considerations of cost are decisive against any such plan."

187 *Ibid.*, p 132.

Much more fundamental changes took place after the turn of the millennium. Stock markets were changed by Regulation NMS. The SEC has described changes in the nature of trading for NYSE-listed stocks as "extraordinary". In January 2005, the NYSE executed approximately 79.1% of the consolidated share volume in its listed stocks. In October 2009, the figure was down to 25.1%. The change was facilitated by regulation and technological advancement and attributable to the rise of alternative venues.[188] Moreover, the NMS rules concerning automated access necessitated by Rule 611 were "the death knell for the specialist system on the NYSE".[189]

The history of the NYSE shows that alternative venues are part of the evolution of stock exchanges. The rise of various kinds of alternative venues for trade execution has changed the nature of stock exchanges.

One can distinguish between different kinds of alternative venues of trade execution on the basis of how they work (their function, section 3.3.2) or regulation (their legal classification in the EU, section 3.3.3, and the US, section 3.3.4). While the efficiency of price discovery can be reduced by the mere existence of many alternative venues, the business model of alternative venues that are dark pools is based on reducing the transparency of price discovery for most traders. The regulation of broker-dealer order internalisation and the limits of unregulated OTC markets play a key role in the development of alternative venues in the EU and US (section 3.4). SME exchanges have been used as a tool to address the shortage of companies with publicly-traded shares (section 3.5).

3.3.2 The Function of Alternative Venues

Alternative systems can work in different ways and have different functions. Obviously, if alternative venues are defined as the alternative to stock exchanges, the definition is very broad indeed – virtually unlimited – and can cover many kinds of systems.[190]

188 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section I.

189 Fox MB, Glosten LR, Greene EF, Patel MS (2018) pp 23–24.

190 FESCO (2000) paragraph 11: "The experts group has agreed that, for the purpose of this paper, the following definition of ATS should be used: 'An ATS is an entity which, without being regulated as an exchange, operates an automated system that brings together buying and selling interests – in the system and according to rules set by the system's operator – in a way that forms, or results in, an irrevocable contract.'"

The oldest major alternative is over-the-counter (OTC) trading. OTC contracts are nowadays defined as privately negotiated contracts that are not executed on a regulated exchange.[191]

There is a large variety of alternative venues. One can generally distinguish between alternative venues on the basis of: whether the operator focuses on technology or rule-making; the nature of services in general; the principles of the matching of bids; and whether orders are internalised or not.

First, the operator of an alternative system can focus on technology or the system's rules.[192] After the turn of the millennium, Baum distinguished between the following kinds of electronic facilities that are alternative systems:[193] passive electronic bulletin boards;[194] active electronic bulletin boards;[195] order-routing systems;[196] day-trading centers;[197] crossing systems;[198] proprietary trading systems; or electronic communication networks. When the operator of an alternative system makes rules, the operator regulates the characteristic services of the system.

Second, an alternative system can be limited to just some of the typical exchange services.[199] One can distinguish between pre-trading activities, trading

191 See, for example, recital 4 and point 7 of Article 2 of Regulation 648/2012 (EMIR).

192 Recital 6 of Directive 2004/39/EC (MiFID).

193 Baum H (2002) p 106.

194 Only offers are posted; trading takes place between the parties and the system is not involved. See, for example Article 25 of Regulation (EU) 2020/1503 (ELSP Regulation).

195 The system matches offers, acting as an agent for one party.

196 Orders are collected and passed for profit to a specific trading platform. SEC (2000) Part II, I.B footnote 10: "These order-routing systems may be operated by, or on behalf of, an OTC market maker or exchange market maker that executes customer orders primarily against the account of such market maker as principal, other than riskless principal."

197 Rooms and computer terminals linked to exchange members are provided for trading by private investors.

198 SEC (2000) Part II, I.B: "The definition [of ECN] specifically excludes internal broker-dealer ... crossing systems – i. e., systems that cross multiple orders at a single price set by the ECN and that do not allow orders to be crossed or executed against directly by participants outside of the specified times."

199 Mues J (1999) pp 29 – 30; Baum H (2002) p 106: "Typical exchange services are: dissemination of pre-trade information, order routing, price determination, matching and confirmation, reporting and documentation, dissemination of post-trade information, clearing and settlement ..." Macey JR, Kanda H (1990) pp 1009 – 1010: "We show that the product offered by organized securities exchanges, which is called a 'listing,' can be unbundled into four component parts. Specifically, organized exchanges provide listing companies with: (1) liquidity, (2) monitoring of exchange trading, (3) standard form, off-the-rack rules to reduce transactions costs, and (4) a signalling function that serves to inform investors that the issuing companies' stock is of high quality."

activities, and post-trading activities. Moreover, the services can include clearing and central counterparty services as well as settlement and custody functions.[200] Consequently, these services can include: dissemination of pre-trade information and post-trade information;[201] bringing together parties that want to participate in trading;[202] price discovery;[203] matching of bids (order routing, price determination, matching, confirmation); acting as central counterparty;[204] reporting and documentation;[205] and clearing and settlement.[206] Like stock exchanges, an alternative system can provide signalling services for issuers.[207]

Third, one can distinguish between different kinds of alternative systems on the basis of the principles of the matching of bids. Buying and selling interests (such as orders, quotes, and indications of interest) can be brought together in the system by means of non-discretionary rules set by the system operator (such as the system's rules, the system's protocols, internal operating procedures, and procedures embodied in computer software).[208] Depending on the rules, one can thus distinguish between: quote-driven systems; order-driven systems (subdivided into continuous matching and auction matching systems);

200 See, for example, European Code of Conduct for Clearing and Settlement of 7 November 2006.

201 See, for example, recital 53 and Article 65 of Directive 2014/65/EU (MiFID II).

202 See, for example, Article 4(1) of Directive 2014/65/EU: "For the purposes of this Directive, the following definitions apply: … (19) 'multilateral system' means any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system; …"

203 Baum H (2002) pp 105–107 on alternative trading systems (ATS): "As a rule, the securities traded here are principally traded on securities exchanges or other organized markets. Some ATSs have price discovery functions; other serve as matching systems using only prices already established on organized markets."

204 See, for example, Article 2 of Regulation 648/2012 (EMIR): "For the purposes of this Regulation, the following definitions shall apply: (1) 'CCP' means a legal person that interposes itself between the counterparties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer; …"

205 *Ibid.:* "For the purposes of this Regulation, the following definitions shall apply: … (2) 'trade repository' means a legal person that centrally collects and maintains the records of derivatives; …"

206 *Ibid.:* "For the purposes of this Regulation, the following definitions shall apply: … (3) 'clearing' means the process of establishing positions, including the calculation of net obligations, and ensuring that financial instruments, cash, or both, are available to secure the exposures arising from those positions; …"

207 For signalling services, see Macey JR, Kanda H (1990) pp 1023–1024.

208 See, for example, recital 6 of Directive 2004/39/EC (MiFID).

price-taking systems (crossing systems); and active bulletin boards.[209] FESCO described their basic principles of matching as follows:[210]

- Quote-driven systems: “Display of dealer quotes. Automatic execution against quotes.”
- Order-driven systems, continuous matching: “Public limit order book. Market and limit orders continously matched in time and price priority.”
- Order-driven systems, auction matching: “Limit orders and ‘at the opening’ orders stored in a batch. Algorithm calculates a single price at a set time to maximize execution.”[211]
- Price-taking (crossing) systems: “File of market orders (possibly with min/max execution limits). System crosses orders at single benchmark prices.”
- Active Bulletin Boards: “Display of invitations to offer. System declares acceptance of offers.”

Fourth, buying and selling interests can be matched on a discretionary basis. An alternative system could be a broker-dealer acting as a market participant in the OTC market or a broker-dealer acting as a market by internalising customer order flows.[212] Over-the-counter (OTC) contracts traditionally have been defined as privately negotiated contracts in the sense that their execution does not take place on a regulated exchange.[213] Broker-dealers traditionally have chosen to internalise orders to avoid regulated exchanges. A broker-dealer can act as a systematic internaliser or operate a dark pool (see sections 3.3.3 and 3.4).[214]

209 FESCO (2000) paragraph 14.

210 *Ibid.*, paragraph 15.

211 See also Schwartz RA (2000): “How do orders meet in time? In a quote driven market, a market maker solves the time problem by selling to the buyer at 10:50 and buying from the seller at 10:55. In an order driven market, the limit order placed by one participant enables another participant at another moment in time to trade with immediacy by market order. A third alternative is the call auction. The call enables a large number of buyers and sellers to meet because it establishes a predetermined meeting point in time.”

212 SEC (2000) Part II, I.C: “In short, Regulation ATS recognized the evolving role that alternative trading systems play in our securities markets. It gave these systems the choice of registering with the Commission either as an exchange or as a broker-dealer. The option they chose – registering as a market participant, or as a market – affected their rights and responsibilities. Regulation ATS provided alternative trading systems with a regulatory structure which incorporated them into the national market system, while preserving their flexibility.”

213 See, for example, recital 4 and point 7 of Article 2 of Regulation 648/2012 (EMIR).

214 See, for example, recital 17 of Directive 2014/65/EU (MiFID II): “Systematic internalisers should be defined as investment firms which, on an organised, frequent, systematic and substantial basis, deal on own account when executing client orders outside a regulated market, an MTF or an OTF. In order to ensure the objective and effective application of that definition

There seems to be a wide range of alternative venues reflecting technological advancement, financial and business innovation, and the evolution of market practices.

3.3.3 The Regulation of Alternative Venues in the EU

A key issue when distinguishing between traditional exchanges and alternative venues is regulation. Alternative venues do not exist if they are subject to the same regulatory framework as traditional exchanges. Alternative venues cannot provide an alternative unless they are regulated in a different way.

The distinction between traditional regulated exchanges and alternative venues has become blurred. The trend is that alternative venues do not escape the scope of financial markets regulation where they are functional equivalents to traditional regulated exchanges. The functional characteristics of the system connecting buying and selling interests have become more important over time.[215]

For example, OTC markets would not really be a functional equivalent to traditional stock exchanges in Europe. There are no efficient secondary markets without standardised instruments and highly organised trading. The trend is that marketplaces for trading in standardised contracts must fall within the scope of the regulatory regime for financial markets regardless of whether the contracts are regarded as OTC contracts or the marketplace is regulated as an exchange. Generally, OTC trading has played a rather limited role on European equity markets.[216]

We can have a look at three EU directives that have had a great impact on alternative exchanges in Europe, namely the Investment Services Directive (ISD),[217] MiFID,[218] and MiFID II.[219]

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to investment firms, any bilateral trading carried out with clients should be relevant and criteria should be developed for the identification of investment firms required to register as systematic internalisers. While trading venues are facilities in which multiple third party buying and selling interests interact in the system, a systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue."

215 See, for example, recital 6 of Directive 2004/39/EC (MiFID): "Definitions of regulated market and MTF should be introduced and closely aligned with each other to reflect the fact that they represent the same organised trading functionality …"

216 Fioravanti SF, Gentile M (2011) p 9.

217 Council Directive 93/22/EEC of 10 May 1993 on investment services in the securities field.

218 Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Di-

Investment Services Directive. When the ISD was adopted in 1993, exchanges enjoyed a national franchise for the organised matching of buy/sell interests in locally issued securities.[220]

The ISD introduced the principles of a single authorisation valid throughout the Community (one-stop shop)[221] and home-country control[222] for financial services in the European Community. It focused on access to regulated markets and transactions carried out on regulated markets. "Regulated markets" were defined as particular named markets that were regulated by the competent authorities.[223] Generally, the ISD increased cross-border competition between financial intermediaries and between exchanges.[224]

Increased cross-border competition and the right to have transactions carried out away from a regulated market[225] could have left plenty of room for alternative venues to emerge. In 2000, FESCO defined an alternative trading system as "an entity which, without being regulated as an exchange, operates an automated system that brings together buying and selling interests – in the system and according to rules set by the system's operator – in a way that forms, or results in, an irrevocable contract".[226] The definition was broad enough to capture "any trading functionality regardless of whether that functionality operates bilat-

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rective 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. MiFID came into force in 2007.

219 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

220 Proposal for a Directive of the European Parliament and of the Council on investment services and regulated markets, COM/2002/0625 final, section II.1.

221 See, for example, Articles 14(2) and 15(1) of Directive 93/22/EEC (ISD).

222 Article 3(1) of Directive 93/22/EEC (ISD).

223 Article 1 of Directive 93/22/EEC (ISD): "For the purposes of this Directive: … 13. regulated market shall mean a market for the instruments listed in Section B of the Annex which:

- appears on the list provided for in Article 16 drawn up by the Member State which is the home Member State as defined in Article 1 (6) (c),
- functions regularly,
- is characterized by the fact that regulations issued or approved by the competent authorities define the conditions for the operation of the market, the conditions for access to the market and, where Directive 79/279/EEC is applicable, the conditions governing admission to listing imposed in that Directive and, where that Directive is not applicable, the conditions that must be satisfied by a financial instrument before it can effectively be dealt in on the market,
- requires compliance with all the reporting and transparency requirements laid down pursuant to Articles 20 and 21; …"

224 See, for example, Demarchi M, Foucault T (2000).

225 Article 14(4) of Directive 93/22/EEC (ISD).

226 FESCO (2000) paragraph 11. See also Baum H (2002) pp 105 – 107.

erally or multilaterally". It included "not only ATSs which contribute to the price discovery process through the matching of priced orders and the lifting of quotes", but even "crossing mechanisms which match buying and selling interests at a ('reference') price determined elsewhere, e.g. on an exchange".[227]

However, the ISD created "a formidable stumbling-block to the emergence of an integrated and competitive trading infrastructure" by only providing for an optional approach to the regulation of market structure. The "concentration rule" allowed national authorities to limit the execution of retail investor orders to "regulated markets".[228] Most venue-based equity trading in Europe was already conducted on large national exchanges that acted as near-monopolies in each country.[229] The concentration rule thus contributed to concentration along national borders and increased the cost of cross-border transactions.[230] Moreover, the existence of the concentration rule as an option resulted in "greater diversity of order-execution methodologies" in the countries that elected not to use the option and gave rise to "discrepancies between national trading conventions".[231]

After the adoption of the ISD, European markets got a more complex structure. The boundary between marketplaces and intermediaries became blurred. There were non-exchange marketplaces, and exchanges had turned into competitive market players.[232] Exchanges could not be regarded as natural monopolies any more.[233]

MiFID. The ISD was replaced by Directive 2004/39/EC on markets in financial instruments (MiFID) that came into force in 2007. The main objectives of MiFID were to allow investment firms to provide cross-border services and to ensure a high level of investor protection.[234] According to the European Commission, a key objective of MiFID was "to ensure robust competition on a level playing-field between trading platforms".[235] MiFID introduced a new market structure

227 FESCO (2000) paragraph 12. See also Baum H (2002) pp 105–107.
228 Article 14(3) of Directive 93/22/EEC (ISD).
229 Petrescu M, Wedow M (2017) p 12.
230 Fioravanti SF, Gentile M (2011) p 6 footnote 1.
231 Proposal for a Directive of the European Parliament and of the Council on investment services and regulated markets, COM/2002/0625 final, section I.3.
232 *Ibid.*, section II.1.
233 Baum H (2004) pp 680–681.
234 Recital 2 of Directive 2004/39/EC (MiFID).
235 European Commission, Review of the Markets in Financial Instruments Directive (MiFID): Frequently Asked Questions. MEMO/11/716, 20 October 2011.

framework and increased the volume of trading outside primary stock exchanges.[236]

First, MiFID eliminated the concentration rule. Primary exchanges could now face competition from other venues across all Member States.

Second, MiFID sought to establish a comprehensive regulatory regime for trading in equity instruments in the EU irrespective of the trading method or platform. It regulated the main types of exchanges in the European financial market and was not limited to venues of primary listing (national stock exchanges). A new category of multilateral trading facilities (MTFs) was introduced to encompass all other organised multi-party trading facilities with non-discretionary execution that were not already registered as regulated markets.[237]

Third, MiFID sought to harmonise pre- and post-trade transparency requirements for equity trading on all regulated platforms.

MiFID thus made the earlier distinction between regulated markets and markets that were not regulated outdated. MiFID was designed to cover "the main types of order-execution arrangement" then in use in the European financial marketplace and to "establish a comprehensive regulatory regime". New organised trading systems were made subject to the same regulatory regime as the earlier regulated markets.[238] In other words, MiFID had ambitious goals.[239]

Regulated markets were defined in a more functional way. The notion of regulated markets was complemented by the notion of MTFs. Both represented "the same organised trading functionality" and excluded bilateral systems "in which an investment firm enters into every trade on own account and not as a riskless counterparty interposed between the buyer and seller".[240]

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236 Fioravanti SF, Gentile M (2011) p 5.

237 Petrescu M, Wedow M (2017) pp 12–13. See even judgment of 16 November 2017, Robeco Hollands Bezit and Others NV v Stichting Autoriteit Financiële Markten (AFM), C-658/15, ECLI:EU:C:2017:870, paragraph 26.

238 Recital 5 of Directive 2004/39/EC (MiFID).

239 See, for example, Robeco, C-658/15, ECLI:EU:C:2017:870, paragraph 43: "... As the Commission states in its written observations, the provisions of Directive 2004/39 concerning regulated markets are not intended merely to prevent abuse. As follows, inter alia, from recitals 2 and 5 of that directive, those provisions aim, more broadly, at the harmonisation needed to offer investors a high level of protection, by establishing a comprehensive regulatory regime governing the execution of transactions in respect of financial instruments so as to ensure a high quality of execution of transactions and to uphold the integrity and overall efficiency of the financial system."

240 *Ibid.*, paragraphs 30–31.

What was characteristic of "regulated markets" and "MTFs" was the existence of a set of rules. In other words, both definitions were technology neutral. Technology neutrality was reflected in the recitals of MiFID:

"The term 'system' encompasses all those markets that are composed of a set of rules and a trading platform as well as those that only function on the basis of a set of rules. Regulated markets and MTFs are not obliged to operate a 'technical' system for matching orders. A market which is only composed of a set of rules that governs aspects related to membership, admission of instruments to trading, trading between members, reporting and, where applicable, transparency obligations is a regulated market or an MTF within the meaning of this Directive and the transactions concluded under those rules are considered to be concluded under the systems of a regulated market or an MTF. The term 'buying and selling interests' is to be understood in a broad sense and includes orders, quotes and indications of interest. The requirement that the interests be brought together in the system by means of non-discretionary rules set by the system operator means that they are brought together under the system's rules or by means of the system's protocols or internal operating procedures (including procedures embodied in computer software). The term 'non-discretionary rules' means that these rules leave the investment firm operating an MTF with no discretion as to how interests may interact. The definitions require that interests be brought together in such a way as to result in a contract, meaning that execution takes place under the system's rules or by means of the system's protocols or internal operating procedures."[241]

The new category of MTFs gained market share. The share of equities trading on MTFs in Europe increased from 0% of turnover in 2008 to 18% by early 2011 and accounted for around 40% of equity trading volumes in 2017.[242] While each regulated market traditionally specialised in the stocks of its home country, MTFs diverted order flow from regulated markets by offering trading in the most liquid EU equities on technologically advanced trading platforms, and lower fees.[243] The elimination of the use of the concentration rule reduced the costs of entry for new venues, as they could compete for volumes across a broader set of instruments from a larger number of countries.[244] This provided "greater opportunities for pan-European trading".[245]

241 Recital 6 of Directive 2004/39/EC (MiFID).

242 Fioravanti SF, Gentile M (2011) pp 5 and 8; Petrescu M, Wedow M (2017) pp 12–13.

243 Fioravanti SF, Gentile M (2011) p 10 and footnote 13.

244 Petrescu M, Wedow M (2017) p 12.

The broader scope of pre- and post-trading transparency requirements contributed to the growth of dark pools.[246] MiFID did not apply to dark pools.[247] The emergence of dark pools was an answer to demand by market participants that wished to continue trading "in the dark".[248]

Having said this, the impact of MiFID on the European market seems to have been less significant than the impact of Regulation NMS on the US market.[249] This was mainly due to discrepancies in the ways in which Regulation NMS and MiFID regulated data consolidation and best execution. Regulation NMS created a consolidated market data system and focused more on price.[250] The problems were ultimately recognised by the European Commission.[251]

MiFID II. The scope of the regulatory regime was expanded by MiFID II that replaced MiFID. MiFID II applies to "investment firms", "market operators", and "multilateral systems", among other things.[252] The respective definitions of these notions have a major effect on the scope of the regime.

According to MiFID II, the operation of a "multilateral system" is a regulated activity. A "multilateral system" means "any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system".[253] There are different kinds of trading venues depending on the characteristics of the multilateral system. For the trading of shares, a multilateral trading system can be a "regulated market"[254] or a "multilateral trading facility"[255] (MTF) but not an "organised trading facility" (OTF).[256] For exam-

245 European Commission (2010) p 5. See also paragraph 70 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange).
246 Fioravanti SF, Gentile M (2011) pp 5 and 8; Petrescu M, Wedow M (2017) pp 12–13.
247 See Boskovic T, Cerruti C, Noel M (2010).
248 Petrescu M, Wedow M (2017) pp 11–12.
249 Fioravanti SF, Gentile M (2011) p 5.
250 *Ibid.*, pp 5 and 7 on MiFID and p 12 on Regulation NMS. See recital 33 and Article 21(1) of Directive 2004/39/EC (MiFID).
251 European Commission (2010) pp 30–31: "The suggestions of the Commission services in this area can be grouped under a number of different headings: a) Improving the quality and consistency of raw trade data and ensuring it is provided in a consistent format (to facilitate consolidation); b) Reducing the cost of post-trade data for investors; and c) Introducing a consolidated tape for the EU market." See also Fioravanti SF, Gentile M (2011) pp 7–8.
252 Article 1(1) of Directive 2014/65/EU (MiFID II).
253 Point (19) of Article 4(1) of Directive 2014/65/EU (MiFID II).
254 Point (21) of Article 4(1) of Directive 2014/65/EU (MiFID II).
255 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II).
256 Point (23) of Article 4(1) of Directive 2014/65/EU (MiFID II).

ple, SME growth markets, growth markets, and junior markets are sub-categories of MTFs.[257]

The "market operators" that fall within the scope of MiFID II are persons that manage or operate the business of a "regulated market".[258] A person that operates an MTF (or an OTF) falls within the scope of MiFID II as an "investment firm"[259] but can even be a "market operator".[260] Each of these activities requires an authorisation.[261] All of these venues or their operators are subject to regulatory compliance obligations.[262]

The "market operator" of an MTF can be a "central counterparty" (CCP). A CCP is defined as "a legal person that interposes itself between the parties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer".[263] However, a CCP is not a multilateral system as such, and there is a distinction between (a) acting as a CCP (and clearing house)[264] for a multilateral system on one hand and (b) operating a multilateral system on the other.

The definition of "investment firm" is a broad one. It means "any legal person whose regular occupation or business is the provision of one or more investment services to third parties and/or the performance of one or more investment activities on a professional basis".[265] Such investment services include, among things, "dealing on own account", "reception and transmission of orders in relation to one or more financial instruments", and "execution of orders on behalf of clients".[266]

MiFID II gives several examples of persons that fall within the scope of the directive by "dealing on own account" in shares.

First, they include persons that are "market makers". A market maker is "a person who holds himself out on the financial markets on a continuous basis as

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257 Recital 132 and point 23 of Article 4(1) of Directive 2014/65/EU (MiFID II).
258 Point (18) of Article 4(1) of Directive 2014/65/EU (MiFID II).
259 Points (8) and (9) of Section A of Annex I to Directive 2014/65/EU (MiFID II).
260 Points 22 and 23 of Article 4(1) of Directive 2014/65/EU (MiFID II).
261 Articles 5(1) and 44(1) of Directive 2014/65/EU (MiFID II).
262 Articles 18(1), 31(1) and 44(1) of Directive 2014/65/EU (MiFID II).
263 Recital 15 and point (51) of Article 4(1) of Directive 2014/65/EU (MiFID II); point (1) of Article 2 of Regulation 648/2012 (EMIR).
264 Article 2 of Regulation 648/2012 (EMIR): "For the purposes of this Regulation, the following definitions shall apply: … (3) 'clearing' means the process of establishing positions, including the calculation of net obligations, and ensuring that financial instruments, cash, or both, are available to secure the exposures arising from those positions; …"
265 Point (1) of Article 4(1) of Directive 2014/65/EU (MiFID II).
266 Section A of Annex I to Directive 2014/65/EU (MiFID II).

being willing to deal on own account by buying and selling financial instruments against that person's proprietary capital at prices defined by that person".[267]

Second, persons that fall within the scope of MiFID II by "dealing on own account" in shares include persons that "deal on own account when executing client orders".[268] A sub-category of this group is "systematic internalisers". They have been defined in MiFID II as investment firms which, on an organised, frequent, systematic and substantial basis, deal on own account by executing client orders – outside regulated trading venues and without operating a multilateral system.[269]

Systematic internalisers must not become the functional equivalents of "multilateral systems". According to a Commission Delegated Regulation, "[a] systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue. A systematic internaliser should not consist of an internal matching system which executes client orders on a multilateral basis, an activity which requires authorisation as a multilateral trading facility (MTF). An internal matching system in this context is a system for matching client orders which results in the investment firm undertaking matched principal transactions on a regular and not occasional basis."[270]

Third, examples of persons that fall within the scope of MiFID II by "dealing on own account" in shares include persons that "are members of or participants in a regulated market or an MTF or have direct electronic access to a trading venue" or "apply a high-frequency algorithmic trading technique".[271]

Generally, electronic markets seem to have adapted to new EU regulations in the same way they did to Dodd-Frank in the US. Overall market volumes are up.[272]

Conclusion. In the EU, the main design principle applicable to alternative venues is that they should fall within the scope of the regulatory regime for traditional exchanges when they are functional equivalents to multilateral systems.

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267 Point (7) of Article 4(1) of Directive 2014/65/EU (MiFID II).

268 Points (2) and (3) of Section A of Annex I to Directive 2014/65/EU (MiFID II); point (d) of Article 2(1) of Directive 2014/65/EU (MiFID II).

269 Recital 17 and point 20 of Article 4(1) of Directive 2014/65/EU (MiFID II).

270 Recital 19 of Regulation (EU) 2017/565. See also Article 12 of Regulation (EU) 2017/565 on the definition of a systematic internaliser.

271 Article 2(1) of Directive 2014/65/EU (MiFID II).

272 Lee Olesky, Opinion Mifid: How the market has adapted to Mifid II. Financial Times, 10 August 2018.

An internal matching system that executes client orders on a multilateral basis falls within the regulatory regime for traditional exchanges as an MTF. The regulatory regime therefore has grown hand in hand with the evolution of alternative trading mechanisms. The interests of issuer-firms have not belonged to the drivers of legislative change.

3.3.4 The Regulation of Alternative Venues in the US

The regulation of alternative venues has reduced small-company IPOs in the US. In the US, the Securities and Exchange Commission (SEC) has distinguished between four kinds of trading centers (or markets): registered exchanges, Electronic Communications Networks (ECNs), dark pools, and broker-dealer internalisation.[273] Registered exchanges have to register with the SEC and meet the regulatory requirements. ECNs and dark pools are regarded as "alternative trading systems" (ATS) that trade listed stocks and other exchange-traded products. Therefore, the three principal types of trading venues are stock exchanges, alternative trading systems, and non-ATS off-exchange trade, which is mostly internalisation.[274]

The term ECN was coined by the SEC in 1998.[275] It describes a particular way to bring together buying and selling interests. The SEC has defined an ECN "as any electronic system that widely disseminates to third parties orders entered into it by an exchange market maker or over-the-counter ('OTC') market maker, and permits such orders to be executed in whole or in part."[276] The term ECN thus refers to "order-driven systems where the buy and sell orders of investors meet directly in an order book, either in a call auction or in continuous trading. To conduct trades on ECNs, subscribers (institutional investors, broker-dealers, and market makers) place trades directly with an ECN. Individual investors must have an account with a broker-dealer subscriber in order to place trades on an ECN."[277] As alternative trading systems (ATSs), ECNs are required to register

273 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.

274 Fox MB, Glosten LR, Rauterberg GV (2019) p 15.

275 SEC Rule 6954(c); SEC Release No. 34–39729 (March 6, 1998). See even Baum H (2002) pp 105–107: "What are an ECN and/or an ATS? No generally accepted definitions exist. Put simply, an ECN brings together buyers and sellers for an electronic execution of trades."

276 17 CFR §240.11Ac1–1(a)(8). See SEC (2000) Part II, I.B.

277 Christiansen H, Koldertsova A (2009) p 228, Box III.3.1.

with the SEC as broker-dealers. The SEC publishes a list of ATSs including all ECNs.

Where a broker-dealer prefers not to act as a market by internalising customer order flows, it can act as a market participant in the OTC market.[278] The SEC's definition of an ECN excludes internal broker-dealer order-routing systems and crossing systems.[279]

The 1975 Amendments. In the early 1970s, Congress was concerned about trading fragmentation and poor customer executions. Congress believed that they resulted from the trading of securities in separate, unconnected markets. Congress directed the SEC to facilitate the development of a national market system for securities as part of the Securities Acts Amendments of 1975 (see section 4.2.4).[280] An essential means to achieve a national market system was "to make information on prices, volume, and quotes for securities in all markets available to all investors, so that buyers and sellers of securities, wherever located, can make informed investment decisions and not pay more than the lowest price at which someone is willing to sell, or not sell for less than the highest price a buyer is prepared to offer."[281] According to the SEC, these findings and objectives have guided it as it has "sought to keep market structure rules up-to-date with continually changing economic conditions and technology advances".[282]

However, the assumption that one market will best serve the needs of all investors did not capture the realities of markets. Investors have different needs *inter se*, and various kinds of other market participants have needs as well. Different and fragmented markets developed to serve them as a result of competition.[283]

When ECNs emerged,[284] they were not integrated into the national market system. Their growth created a two-tiered market, that is, the traditional public

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278 SEC (2000) Part II, I.C: "In short, Regulation ATS recognized the evolving role that alternative trading systems play in our securities markets. It gave these systems the choice of registering with the Commission either as an exchange or as a broker-dealer. The option they chose – registering as a market participant, or as a market – affected their rights and responsibilities."
279 SEC (2000) Part II, I.B and footnote 10.
280 Section 7 of the Securities Acts Amendments of 1975.
281 See SEC (2000) Part II, II.A, footnote 17 quoting SEC, Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets (February 2, 1972), 37 FR 5286 (February 4, 1972).
282 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section II.
283 Blume ME (2000).
284 See Christiansen H, Koldertsova A (2009) pp 227–229.

market. The use of ECNs enabled market makers to maintain artificially wide quotes in the public market. The new ECN market with limited access had better prices.[285]

Order Handling Rules. In 1996, the SEC Commission adopted the Order Handling Rules[286] to address the two-tiered market. Market makers and specialists were now required to reflect in their quote the price of any orders they placed in an ECN if the price was better than their own public quotation. This helped to narrow the spreads between bids and offers and bring ECNs into the national market system.

However, the Order Handling Rules neither said how ECNs should be regulated in the markets nor required all market participants to report to the public quotation stream the orders they placed in ECNs. It turned out that the regulation of broker-dealers was not adequate.[287]

Regulation ATS. In 1998, the SEC adopted Regulation ATS.[288] Regulation ATS laid down a comprehensive framework that allowed alternative trading systems to choose whether to register as an exchange or to be licensed as a broker-dealer subject to certain additional requirements.[289] An important element in the introduction of Regulation ATS was the SEC's wish to level the playing field. In addition to increasing the regulation of certain alternative trading systems, it relaxed certain regulatory requirements for exchanges to enable them to compete more effectively. An important relaxation was the removal of the requirement that an exchange should be a mutual organisation, thus paving the way for exchanges to demutualise and become for-profit organisations.[290]

Both the registered exchanges and their alternatives are run by trading systems that automatically receive, process, and execute orders.

After the adoption of Regulation ATS, an ECN could register either as an exchange[291] or as a broker-dealer.[292] In the latter case, it had a duty to comply with

285 SEC (2000) Part II, II.A.
286 Exchange Act Release No. 37619 A (Order Handling Rules Release).
287 SEC (2000) Part II, II.B; FESCO (2000) paragraph 26.
288 SEC Release No. 34–40760 (Regulation of Exchanges and Alternative Trading Systems, "Regulation ATS").
289 See FESCO (2000) paragraph 27; SEC (2000) Part II, II.C.
290 FESCO (2000) paragraph 28.
291 Section 6 of the Securities Exchange Act.
292 Section 15 of the Securities Exchange Act.

requirements under Regulation ATS.[293] The choice influenced costs and access to broker-dealers.[294]

First, registration as a broker-dealer eliminated the statutory and costly obligation to become a self-regulatory organisation.

Second, registered exchanges were required to offer broad access to broker-dealers. Broker-dealers that internalised trades were not subject to fair access requirements. An alternative trading system that was exempt from exchange registration was not required to provide fair access unless it reached a 5% trading volume threshold in a stock. Access to the undisplayed liquidity of dark pools and broker-dealers was determined primarily by private negotiation.[295]

This influenced the business model of exchanges and ECNs: "ECNs started executing and reporting trades through particular exchanges and sharing in data revenues."[296] To combine the regulatory status of the exchange with the trading platforms of ECNs, exchanges and ECNs formed alliances: "The ECN benefited as it did not have to build regulatory costs into its business model and the exchange benefited from the transaction and market data fee revenues generated by the ATSs."[297]

Regulation NMS. In 2005, the SEC adopted Regulation NMS.[298] Regulation NMS has been described as an example of interventionist regulatory choices.[299]

The stated objectives of Regulation NMS were to promote "competition among markets and competition among individual orders",[300] and to "minimize the transaction costs of long-term investors and thereby to reduce the cost of capital for listed companies".[301] Its main tools consisted of four kinds of rules: the "Order Protection Rule", the "Access Rule", the "Sub-Penny Rule", and amendments to the "Market Data Rules".[302] Regulation NMS was designed to create a

293 See SEC Release No. 34 – 61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.A.3. For the regulatory differences between registered exchanges and ATSs, see section IV.C.3.
294 See *ibid*., section IV.C.3.
295 See *ibid*.
296 Aggarwal R, Ferrell A, Katz J (2007).
297 *Ibid*.
298 Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496 (June 29, 2005) (Regulation NMS Release).
299 Gadinis S (2008) p 315 on a "surprising choice of regulatory design": "In market structure for equity trading, U.S. regulatory choices are interventionist, and constrain investors' flexibility, while E.U. rules place greater confidence on market forces."
300 Regulation NMS, I.B.1.
301 Regulation NMS, I.B.2.
302 Regulation NMS, Summary.

linked national market system and foster competition among the exchanges. This was to be accomplished primarily in two ways. First, Regulation NMS created a consolidated market data system. Second, Regulation NMS implemented the "Order Protection Rule" that requires that any trading venue must execute an order at the current best price in the nation, that is, the National Best Bid and Offer (NBBO).[303]

This influenced market structure as well.[304] On one hand, Regulation NMS made the business of new trading venues easier and contributed to fragmentation.[305] On the other, it was even a driver of concentration. Since Regulation NMS confers a regulatory benefit on exchanges that have automated access to the quotations of traditional exchanges, traditional exchanges in the US became more interested in establishing alliances or mergers with ECNs.[306] Moreover, "exchanges succeeded in [reducing] competition for order flow against other trading venues when they lobbied successfully for the continuation and expansion of the trade-through rules from the organized exchanges to the over-the-counter markets".[307]

Effect on IPOs. It turned out that the Order Handling Rules of 1997 and Regulation ATS of 1998 reduced the number of IPOs. According to an OECD study, they "effectively disintegrated the underlying economic support infrastructure that for decades had fueled the U.S. capital markets".[308] These two regulatory changes "were the key blows that were the most damaging to the new issue market in the U.S., particularly for small company IPOs".[309] Intended to reduce trad-

303 Adrian J (2015 – 2016) pp 260 – 261.
304 SEC Release No. 34 – 61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section I: "A primary driver and enabler of this transformation of equity trading has been the continual evolution of technologies for generating, routing, and executing orders. These technologies have dramatically improved the speed, capacity, and sophistication of the trading functions that are available to market participants. Changes in market structure also reflect the markets' response to regulatory actions such as Regulation NMS, adopted in 2005, the Order Handling Rules, adopted in 1996, as well as enforcement actions, such as those addressing anti-competitive behavior by market makers in NASDAQ stocks."
305 Gadinis S (2008) p 323.
306 Aggarwal R, Ferrell A, Katz J (2007).
307 Macey JR, O'Hara M (2005) p 586. For a discussion of the trade-through rule, see Gadinis S (2008) pp 346 – 352.
308 Weild D, Kim E, Newport L (2013) p 15.
309 *Ibid.*, p 4.

ing spreads, they hampered market making and contributed to a decline in the number of companies going public.[310]

3.4 Broker-Dealer Order Internalisation and Dark Pools in EU and US Law

3.4.1 General Remarks

Stock exchanges have long faced competition from off-exchange trading platforms and order internalisation by broker-dealers. Dark trading has existed through over-the-counter (OTC) trading or special hidden order types on exchanges. The most important form of order internalisation is now trading on dark pools. Dark pools are "closed crossing networks which isolate orders from the broad trading and provide participants with liquidity not displayed on open order books".[311]

For the purposes of this book, broker-dealer order internalisation and dark pools are interesting for four reasons. First, they indicate that there can be demand for alternative trading mechanisms that fulfil a need. Second, their popularity indicates that maximising "liquidity" may be less important than ensuring a reasonable or acceptable level of liquidity and addressing other objectives. Market participants are heterogeneous and balance different objectives. Third, the regulation of stock exchanges has been adapted to cover even these trading mechanisms. Fourth, the history and regulation of broker-dealer order internalisation and dark pools could help to understand what should be done before part of equity trading could be moved to what we call "microexchanges" (Chapter 8) in the future.

The business of dark pools is made commercially interesting by the intensity of the regulation of exchanges. The regulatory framework gives incentives to move business away from exchanges to dark pools. In the US, dark pools bene-

310 *Ibid.*, pp 15–16 and 4: "Structural and regulatory changes that began with the new Order Handling Rules in 1997 and Regulation Alternative Trading Systems (ATS) in 1998 were the key blows that were the most damaging to the new issue market in the U.S., particularly for small company IPOs. These changes set in motion a dramatic shrinkage in trading spreads and tick sizes in all stocks. While this was, on its face, good news for investors, the ultimate consequences of smaller spreads and tick sizes was manifest in a stark decline in the number of companies going public."

311 Christiansen H, Koldertsova A (2009) p 228, Box III.3.1. See also Shorter G, Miller RS (2014) pp 3–4 on the subgoups of dark pools.

fited from the adoption of Regulation ATS by the SEC in 1998 and Regulation NMS in 2005.[312] In the EU, the demand for dark pools increased in part due to regulatory changes regarding pre-trade transparency under MiFID.[313] The wider scope of pre-trade transparency requirements under MiFID II is expected to increase trading on dark pools.[314]

In the US, the volume of trading on dark pools climbed from about 4% of overall trading volume in 2008 to about 15% in 2013.[315] In the EU, equity trading conducted on dark pools grew from less than 1% in 2009 to over 8% in 2016.[316]

In the following, we will have a brief look at the business of dark pools (section 3.4.2) and their regulation in the US and the EU (sections 3.4.3, 3.4.4 and 3.4.6). In practice, the question is whether the activity falls within the scope of the definition of ECN in the US or the definition of multilateral trading facility (MTF) in the EU. We will also have a look at the regulation of broker-dealer internalisation in the US (section 3.4.5) and in the EU (section 3.4.7). The business of dark pools has increased because of algorithmic and high-frequency trading. Both are regulated in the US and the EU (section 3.4.8).

The interests of issuer-firms do not seem to have played any particular role in the regulation of dark pools in the EU and the US.

3.4.2 The Business of Dark Pools

The traditional core business of dark pools includes the provision of pre-trade anonymity. Dark pools match buyers and sellers anonymously without public pre-trade information on the best prices.[317] Institutional investors that trade in large blocks may prefer to trade anonymously.[318]

In the commercial sense, a dark pool is a closed crossing network that isolates orders from the broad trading and facilitates trades that are anonymous rather than displayed on open order books (lit books). Trades in a dark pool are anonymous both in terms of price and identity of participants.

The "textbook" business model of the operator of a dark pool is to "offer trading services to institutional investors and others that seek to execute large

312 Shorter G, Miller RS (2014) pp 1 and 5–6; Kaya O (2016) p 3.
313 Petrescu M, Wedow M (2017) p 4.
314 *Ibid.*, pp 6 and 8.
315 Shorter G, Miller RS (2014) p 4; Aguilar LA (2015); Petrescu M, Wedow M (2017) p 20.
316 Petrescu M, Wedow M (2017) p 5, Chart 1. See also Fioravanti SF, Gentile M (2011) p 9.
317 Kaya O (2016) p 3.
318 Gadinis S (2008) pp 327–328.

trading interest in a manner that will minimize the movement of prices against the trading interest and thereby reduce trading costs".[319]

The rise of dark pools is connected to the predatory practices of high-frequency traders. There are two views about high-frequency trading (HFT).[320] While some argue that high-frequency traders improve market quality by lowering bid/ask spreads, reducing volatility, improving short-term price discovery, and creating competitive pressures that reduce broker commissions,[321] others argue that the predatory practices of high-frequency traders can lead to higher costs of trading for other participants.[322]

Dark pools that operate with waivers from pre-trade transparency can make it more difficult for high-frequency traders to find information that they can use against other market participants in front-running.[323] Demand for trading venues that do not disclose information about volumes and prices of orders in the order book has increased as a protection against high-frequency trading,[324] especially in the US but even in Europe.[325]

Moreover, high-speed trading strategies reduce trade sizes for equity trading, and smaller average trade sizes reduce the market's ability to absorb larger orders without significant price movements. HFT algorithms can detect volume hidden by means of iceberg orders on lit order books. This gives incentives to trade large blocks in dark pools. [326]

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319 SEC Release No. 34 – 61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.3. See also Kaya O (2016) p 3.

320 Generally, see Fox MB, Glosten LR, Greene EF, Patel MS (2018) p 17.

321 MacIntosh JG (2013).

322 Weild D, Kim E, Newport L (2013) pp 20 – 21; Petrescu M, Wedow M (2017) p 10: "However, the presence of HFT can also lead to higher costs of trading for other participants due to predatory practices. For example, one HFT strategy is to use algorithms and high speed to obtain and exploit information about current market supply and demand, especially concerning the presence of large orders. This information can be used for front running some orders, which increases trading costs for investors placing these orders. In some trading venues, high frequency traders pay a premium to receive more detailed order and trading data before it becomes available to other investors, allowing them to incorporate the information in their trading strategies."

323 Petrescu M, Wedow M (2017) pp 10 – 11; Shorter G, Miller RS (2014) p 3: "Front-running refers to the practice of trading ahead of a large order to benefit from the anticipated price movement that the large order will create."

324 Petrescu M, Wedow M (2017) p 9: "The growth of dark pools followed an increase in the HFT share of total equities trading in Europe; the share of trades involving HFT grew from a negligible amount to over 30 % by 2009, and since then has remained around one-third."

325 *Ibid.*, p 20.

326 *Ibid.*, p 20.

Services. No single venue can serve the interests of all investors.[327] Dark pools can vary quite widely in the services they offer their customers. Customers include institutional investors and, paradoxically, high-frequency traders.

For institutional investors, liquidity is the key service.[328] In other words, they want to trade large amounts without altering the price of the asset.[329] New order types have been created for this purpose. "Immediate or cancel" (IOC) orders require immediate execution and do not invite a matching counter-order for unexecuted portions. The opposite is an "Indication of Interest" (IOI) order that aims to gauge the possibility of finding a matching counter-order but without posting a quote.[330]

However, where trading volumes are small in a dark pool, it can be difficult to attain a critical mass and a sufficient level of liquidity. In the US, this has given dark pool operators incentives to allow proprietary trading or to give informational advantages to high-frequency traders. This practice gives rise to obvious conflicts of interest.[331]

For high-frequency traders, the advancement of dark pools is thus a threat and an opportunity. It is an opportunity, because HFT firms can benefit from the services of dark pools. The key service for high-frequency traders is access to information about large orders to enable front-running.[332] Because of the interests of high-frequency traders, dark pool operators can have incentives to abuse client trust, give special benefits to high-frequency traders, and breach promises to other clients for profit.[333]

On some trading venues, high-frequency traders pay a premium to receive more detailed order and trading data before it becomes available to other investors, allowing them to incorporate the information in their trading strategies. Predatory practices such as front-running can lead to higher costs of trading for other participants. In the US, many dark pool subscribers became victims of front-running after Regulation NMS created a consolidated market data system and implemented the Order Protection Rule.

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327 *Ibid.*, p 7.
328 *Ibid.*, p 7.
329 Kaya O (2016) p 3.
330 Gadinis S (2008) p 322.
331 See Aguilar LA (2015); Petrescu M, Wedow M (2017) p 21.
332 Petrescu M, Wedow M (2017) p 10; Shorter G, Miller RS (2014) p 3: "Front-running refers to the practice of trading ahead of a large order to benefit from the anticipated price movement that the large order will create."
333 Petrescu M, Wedow M (2017) p 11; Aguilar LA (2015).

However, the advancement of dark pools can also pose a threat to the business model of high-frequency traders. This can be illustrated with two episodes of the evolution of HFT. The period before the financial crisis of 2007–2009 was marked by the rise of HFT. After the financial crisis, the market share of HFT in equity trading started to recede. There were several reasons for the decreasing HFT market share such as increased competition, rising costs, regulation, and the emergence of alternative trading platforms.[334]

Ownership. Dark pools can differ in terms of ownership. They can be independently operated, owned by broker-dealers or a consortium of broker-dealers, or even the exchanges themselves.[335] Where a dark pool operator also operates a traditional (lit) order book exchange, it benefits from access to a ready-made client base.[336]

Trading. Dark pool trading is not homogeneous. It can be organised in different ways[337] depending on whether trading is one-sided or two-sided, on the order types and matching mechanisms, and on specialisation.

First, dark pools can be based on one-sided trading or two-sided trading.[338] One-sided trading takes place at a single price (such as the midpoint of the national best bid and offer). At any point in time, dark liquidity only exists on one side (on the buy side or the sell side of a transaction but not both). Two-sided trading takes place at different prices on both the buy and sell sides of the market. These differences can have different market impacts.

Second, dark pools can compete by offering different order types and matching mechanisms:[339] "As a matter of a fundamental distinction, some display quotes as part of their business model while others do not. Trade execution can take place either automatically or through a negotiation and may occur either throughout the day or at scheduled intervals."[340]

Third, dark pools can specialise in a specific client base, in large orders, or in a few equity groups.[341] "[S]ome dark pools, such as block crossing networks, offer specialized size discovery mechanisms that attempt to bring large buyers

334 Kaya O (2016) p 2.
335 Christiansen H, Koldertsova A (2009) p 228, Box III.3.1; Shorter G, Miller RS (2014) pp 3–4.
336 Petrescu M, Wedow M (2017) p 5.
337 This applies to markets in general. See Ostrom E (2010) p 420.
338 Foley S, Putniņš T (2016); Shorter G, Miller RS (2014) pp 8–9.
339 Petrescu M, Wedow M (2017) p 5.
340 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.3.
341 Petrescu M, Wedow M (2017) p 5.

and sellers in the same … stock together anonymously and to facilitate a trade between them".[342]

Liquidity. To attract clients, a dark pool requires sufficient liquidity (volumes of orders). There are thus network effects.

On one hand, the existence of network effects could limit the number of dark pools that can be competitive and provide incentives for the consolidation of liquidity to ensure sufficient execution opportunities.[343]

On the other, there is room for a larger number of dark pools if clients accept sufficient liquidity and the maximisation of liquidity is not relevant. For example, the number of dark pools can in that case be increased by specialisation and the differentiation of services offered to clients.[344] In 2010, the SEC noted that dark pools can vary quite widely in the services they offer their customers and that dark pools that primarily match smaller orders executed more than 90% of dark pool trading volume.[345]

Transparency. Transparency obviously plays a key role in the business of dark pools that by definition are not supposed to be transparent. Generally, a high level of transparency benefits those market participants that have the best resources to manage information, making transparency to some extent one-sided.[346] Trade transparency[347] creates its own problems. Trade transparency that high-frequency traders have used for their own benefit has prejudiced liquidity for all other investors.[348] It is thus important to manage transparency levels in dark pools. Some exchange-traded funds (ETFs) use limited transparency as a protection against rivals replicating their portfolios or high-speed investors using the information to trade ahead of large orders.[349]

Conclusions. Dark pools can focus on different kinds of clients, use different kinds of order matching methods and pricing methods, and manage transparency in different ways. This may be useful to know when developing new kinds of marketplaces (Chapter 8).

342 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.3.

343 Petrescu M, Wedow M (2017) p 22.

344 *Ibid.*, pp 22–23.

345 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.3.

346 See, for example, Adrian J (2016).

347 See Moloney N (2014) V.1.2.3, p 431 on the function of trade transparency regulation.

348 *Ibid.*, V.1.2.3, pp 431–432 on the trade-off between transparency and liquidity.

349 Richard Henderson, 'Non-transparent' ETFs set to be a boon for fund managers. Financial Times, 19 April 2019.

3.4.3 The Regulation of Dark Pools: General Remarks

The growth of dark pools follows a period of regulatory and technological change. Generally, concentration has contributed to order internalisation by large institutions.[350] The growth of dark pools in particular can be linked to three developments: the introduction of Regulation NMS in the US, the entry into force of regulations that implemented increased and uniform transparency rules in the EU, and growth in high-frequency trading (HFT) in the US and the EU.[351]

Generally, regulation gives incentives to move trading from exchanges to dark pools in two main ways: by limiting the scope of the regulation of exchanges (increased discretion outside the regulatory regime designed for exchanges, the pull of freedom) and increasing the intensity of the regulation of exchanges (reduced discretion under the regulatory regime designed for exchanges, push).

The regulation of broker-dealer order internalisation and the scope of OTC markets play a key role for the development of alternative venues such as dark pools. Alternative venues cannot provide an alternative, unless they are permitted to exist and their business is feasible. In other words, their business must make legal and commercial sense. Moreover, alternative venues cannot provide an alternative, unless they are subject to a different regulatory framework. They cannot provide an alternative, if they fall within the scope of the same regulatory regime that governs traditional stock exchanges and must comply with the same rules as traditional stock exchanges.

The trend is the expansion of the scope of the regulatory regime for traditional stock exchanges. There is thus less and less room for other kinds of venues. For example, parts of the regulatory regime for traditional exchanges will cover activities in OTC markets as well depending on the nature of market participants, the traded products, the services, and so forth. Examples of this regulatory trend include the 2009 Pittsburgh agreement of G20 leaders,[352] EMIR,[353] REMIT,[354] and MiFID II.[355]

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350 Proposal for a Directive of the European Parliament and of the Council on investment services and regulated markets, COM/2002/0625 final, section II.1: "The following technology-driven trends have transformed the financial trading landscape: … 3. increased internal execution of client orders within investment firms: the concentration of brokerage in the hands of a diminishing number of investment firms and banks is creating a situation in which large volumes of client orders can be executed 'in-house' …"

351 Petrescu M, Wedow M (2017) p 9. For the regulation of algorithmic trading and HFT in the EU, see Lerch MP (2017).

352 See recital 5 of Regulation 648/2012 (EMIR).

For regulatory purposes, the main question in the US and the EU is whether dark pools fall within the scope of the definition of ECN or the definition of multilateral trading facility (MFT), respectively. This can influence transparency requirements. In the EU, there are few exemptions from post-trade transparency requirements. Moreover, the main rule is that investment firms must trade on regulated venues in the EU. Dark pools cannot escape many of the regulatory technical standards (RTS)[356] adopted by the European Commission.

353 Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories. See recital 25 of Regulation 648/2012 (EMIR).

354 Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency. See recitals 5 and 7 of Regulation 1227/2011 (REMIT).

355 See recital 4 of Directive 2014/65/EU (MiFID II). See also Section C of Annex I to MiFID II as well as Article 24 of MiFID II.

356 The Commission Delegated Regulations laying down Regulatory Technical Standards relate, for example, to: package orders (2017/2194); specification of the offering of pre-and post-trade data and the level of disaggregation of data (2017/572); maintenance of relevant data relating to orders in financial instruments (2017/580); reporting of transactions to competent authorities (2017/590); data standards and formats for financial instrument reference data and technical measures in relation to arrangements to be made by the European Securities and Markets Authority and competent authorities (2017/585); the direct, substantial and foreseeable effect of derivative contracts within the Union and the prevention of the evasion of rules and obligations (2017/579); specifying the obligation to clear derivatives traded on regulated markets and timing of acceptance for clearing (2017/582); indirect clearing arrangements (2017/2154); trading obligation for certain derivatives (2017/2417); criteria for determining whether derivatives subject to the clearing obligation should be subject to the trading obligation (2016/2020); regulatory technical standards on access in respect of benchmarks (2016/2021); the information for registration of third-country firms and the format of information to be provided to the clients (2016/2022); transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments and on transaction execution obligations in respect of certain shares on a trading venue or by a systematic internaliser (2017/583); the volume cap mechanism and the provision of information for the purposes of transparency and other calculations (2017/577); clearing access in respect of trading venues and central counterparties (2017/581).

3.4.4 The Regulation of Dark Pools in the US

In the US, the SEC distinguishes between four kinds of trading centers (or markets), namely registered exchanges, Electronic Communications Networks (ECNs), dark pools, and broker-dealer internalisation.[357]

The statutory definition of an "exchange" is laid down in Section 3(a)1) of the Securities Exchange Act.[358] An exchange has to register with the SEC and meet certain statutory requirements.[359] The terms used in the Exchange Act have been defined by the SEC (see below).

Coined by the SEC in 1998,[360] the term ECN describes a particular way to bring together buying and selling interests in listed stocks and other exchange-traded products. The SEC has defined an ECN "as any electronic system that widely disseminates to third parties orders entered into it by an exchange market maker or OTC market maker, and permits such orders to be executed in whole or in part …"[361]

Unlike dark pools, ECNs display orders. The term ECN thus refers to "order-driven systems where the buy and sell orders of investors meet directly in an order book, either in a call auction or in continuous trading".[362]

Dark pools are subject to the same rules that govern trading on an exchange or trading by a broker-dealer. Regulation ATS adopted by the SEC in 1998[363] and

357 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.

358 15 U.S.C. 78c(a)(1).

359 See SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure).

360 SEC Rule 6954(c); SEC Release No. 34–39729; File No. SR-NASD-97–56 (March 6, 1998).

361 See SEC (2000) Part II, I.B. Electronic communications networks are defined in Rule 11Ac1–1 under the Exchange Act, 17 CFR 240.11Ac1–1(a)(8). §240.11Ac1–1(a): "For the purposes of this section: … (8) The term electronic communications network, for the purposes of §240.11Ac1–1(c)(5), shall mean any electronic system that widely disseminates to third parties orders entered therein by an exchange market maker or OTC market maker, and permits such orders to be executed against in whole or in part; except that the term electronic communications network shall not include: (i) Any system that crosses multiple orders at one or more specified times at a single price set by the ECN (by algorithm or by any derivative pricing mechanism) and does not allow orders to be crossed or executed against directly by participants outside of such times; or (ii) Any system operated by, or on behalf of, an OTC market maker or exchange market maker that executes customer orders primarily against the account of such market maker as principal, other than riskless principal."

362 Christiansen H, Koldertsova A (2009) p 228, Box III.3.1.

363 SEC Release No. 34–40760 (Regulation of Exchanges and Alternative Trading Systems, "Regulation ATS").

Regulation NMS adopted by the SEC in 2005[364] are "commonly cited as pivotal in the proliferation of dark pools".[365]

Regulation ATS was designed to "facilitate an appropriately balanced market structure". On one hand, the regulatory framework must "provide for strong investor protection and enable businesses to raise the capital they need to grow". On the other, it must "encourage market innovation while ensuring basic investor protections".[366]

In the new Rule 3b – 16 of Regulation ATS, the SEC interpreted key language in the statutory definition of "exchange" under the Exchange Act[367] in a new way. According to the SEC, the rule change was necessary because of automated trading and technological development. Rule 3b-16 therefore "defines terms in the statutory definition of exchange to include markets that engage in activities functionally equivalent to markets currently registered as national securities exchanges".[368]

Rule 3b – 16 explicitly excludes those systems that the SEC believes perform only traditional broker-dealer activities. Rule 3a1 – 1 exempted most alternative trading systems from the definition of "exchange" and therefore the requirement to register as an exchange. However, any system exercising self-regulatory powers must register as an exchange or be operated by a national securities association, because self-regulatory activities in the securities markets must be subject to SEC oversight under the Exchange Act.[369]

Regulation ATS thus allowed "most alternative trading systems to choose to be regulated either as exchanges or as broker-dealers", depending on whether they chose to comply with Regulation ATS or not.[370]

Regulation ATS requires alternative trading systems with significant volume to display their best-priced orders for securities in which they have 5 percent or more of total trading volume in the public quote.[371] In practice, most individual dark pools are exempted from this requirement. Unlike exchanges, they are thus not required to disclose ongoing offers to buy or sell stocks to the public.[372]

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364 SEC Release No. 34 – 51808 (Regulation NMS).
365 Shorter G, Miller RS (2014) p 5.
366 Regulation ATS, section II.
367 Section 3(a)(1) of the Exchange Act.
368 See Regulation ATS, section III on the function of Rule 3b-16.
369 *Ibid.*, II.B.
370 *Ibid.*, II.B.
371 Regulation ATS, section IX.A.2.b; Shorter G, Miller RS (2014) p 5.
372 Shorter G, Miller RS (2014) p 5: "Dark pools are subject to the same rules that govern trading on an exchange or by a broker-dealer. However, unlike exchanges, they are not required to publicize ongoing offers to buy or sell stocks, called quotes."

Regulation NMS[373] contains substantive rules designed to change the structure of US equity markets. Regulation NMS has been described as "a watershed event" for US equity markets as it abolished rules that had protected the manual quotation systems of incumbent exchanges.[374]

For dark pools, the most important rules are the order protection rule, the access rule and the market data rules. The purpose of order protection rules was to prevent the execution of trades at prices inferior to protected quotations displayed by other trading centers, subject to an applicable exception. To be protected, a quotation must be immediately and automatically accessible. The access rule requires fair and non-discriminatory access to quotations. Amendments to the market data rule changed the requirements for consolidating, distributing, and displaying market information.[375]

Regulation NMS contributed to a fragmented trading marketplace that could be exploited by HFT firms. The order protection rule aimed at ensuring that investors receive the best buy or sell price when their orders are executed by eliminating the ability to have orders "traded through" (that is, executed at a worse price). The access rule required better market center linkages and lower access fees. The market data rule required market centers to route orders for execution to the market center that shows the best price.[376]

Conclusion. The growth of dark pools in the US was driven by regulation. The consolidated market data system created a major difference between exchanges and dark pools. While this system collects "consolidated quotation data" and "consolidated trade data", there are exemptions from the duty to disclose information about quotations.[377] The business of dark pools is facilitated by such exemptions from pre-trade transparency requirements. Moreover, Regulation NMS fostered competition between venues but not the kind of competition that would directly have benefited market investors and issuers. Regulation NMS did not increase the competition for best prices and liquidity between lit venues. Instead, it fostered competition in terms of speed, fees, and the availability of exotic order types. Scanning venues for prices and the actual routing of orders across venues could increase the time for execution, the risk of information leakage, and the

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373 SEC Release No. 34–51808 (Regulation NMS).

374 Zhu H (2014).

375 Regulation NMS, Summary.

376 Shorter G, Miller RS (2014) p 6.

377 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.B.1.

business opportunities of HFT firms.[378] Problems with dark pools led to several enforcement actions by the SEC.[379]

3.4.5 The Regulation of Broker-Dealer Internalisation in the US

Regulation ATS allows alternative trading systems to choose to be regulated either as exchanges or as broker-dealers.[380] Where a broker-dealer prefers not to act as an exchange (a market), it can act as a market participant in the OTC market by internalising customer order flows.[381] The SEC's definition of an ECN excludes internal broker-dealer order-routing systems and crossing systems.[382]

There are many broker-dealers that execute trades internally in NMS stocks in the US.[383] Such broker-dealers generally fall into two categories, namely OTC market makers and block positioners.

An OTC market maker is defined as "any dealer that holds itself out as being willing to buy and sell to its customers, or others, in the United States, an NMS stock for its own account on a regular or continuous basis otherwise than on a national securities exchange in amounts of less than block size."[384]

According to the SEC, a block positioner generally means "any broker-dealer in the business of executing, as principal or agent, block size trades for its customers".[385] "Block size" means an order of at least 10,000 shares or for a quantity of stock having a market value of at least $200,000.[386]

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378 Petrescu M, Wedow M (2017) pp 20 – 21.

379 See In the Matter of Pipeline Trading Systems LLC, et al., Exchange Act Release No. 65609 (October 24, 2011); In the Matter of eBX, LLC, Exchange Act Release No. 67969 (October 3, 2012); In the Matter of Liquidnet, Inc., Exchange Act Release No. 72339 (June 6, 2014); In the Matter of ITG Inc. and Alternet Securities, Inc., Exchange Act Release No. 75672 (Aug. 12, 2015); In the Matter of UBS Securities LLC, Exchange Act Release No. 74060 (Jan. 15, 2015). See also Aguilar LA (2015); Hintz A (2015).

380 See SEC (2000) Part II, I.C.

381 *Ibid.*, Part II, I.C: "In connection with the New York Stock Exchange's proposal to eliminate its rule limiting its members from dealing in its listed stocks, the Commission requested comment on the impact of fragmentation, particularly that arising from internalization of customer order flow."

382 See *ibid.*, Part II, I.B and footnote 10.

383 SEC Release No. 34 – 61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), section III.4.

384 Rule 600(b)(52) of Regulation NMS; Concept Release on Equity Market Structure, section III.4.

385 Concept Release on Equity Market Structure, section III.4.

Broker-dealers that act as OTC market makers or block positioners conduct their business primarily by directly negotiating with customers or with other broker-dealers representing customer orders.[387]

3.4.6 The Regulation of Dark Pools in EU Law

In the EU, the regulation of dark pools may have multiple objectives. The main concern seems to be whether there is a level playing field for dark pools and traditional marketplaces.[388]

The business of dark pools is affected and in effect limited by: constraints on the rights of "investment firms"[389] to choose on which venues to trade; the large scope of pre-trade disclosure obligations; and the large scope of post-trade disclosure obligations. Competent authorities may waive pre-trade disclosure obligations under certain circumstances. This is significant for the business of dark pools.

Trading obligation for investment firms in the EU. In the EU, investment firms are not free to choose the venue for the trading of shares. If shares are admitted to trading on a regulated market or traded on a trading venue, the main rule is that an investment firm that trades in such shares must use a regulated market, an MTF, a systematic internaliser, or a third-country trading venue assessed as equivalent.[390]

However, there is no such trading obligation, where the trades: "(a) are non-systematic, ad-hoc, irregular and infrequent; or (b) are carried out between eligible and/or professional counterparties and do not contribute to the price discovery process".[391]

For professional counterparties, the question thus is whether the trades "contribute to the price discovery process". Transactions not contributing to the price discovery process have been defined in Commission Delegated Regula-

386 Rule 600(b)(9) of Regulation NMS; Concept Release on Equity Market Structure, section III.4.
387 Concept Release on Equity Market Structure, section III.4.
388 Moloney N (2014) V.1.2.4, pp 433–434: "Dark trading in the equity markets is not troublesome in itself. The benefits to investors include liquidity provision, price impact protection, and lower execution costs. The difficulties arise where dark equity trading is of a similar functionality to lit equity trading ..."
389 Point (1) of Article 4(1) of Directive 2014/65/EU (MiFID II).
390 Article 23(1) of Regulation (EU) 600/2014 (MiFIR).
391 Article 23(1) of Regulation (EU) 600/2014 (MiFIR).

tion (EU) 2017/587. A transaction in shares does not contribute to the price discovery process where any of the circumstances listed in the Delegated Regulaton apply. For example, such transactions include: many transactions with a reference price;[392] transactions that are part of a "portfolio trade",[393] that is, "transactions in five or more different financial instruments where those transactions are traded at the same time by the same client and as a single lot against a specific reference price";[394] many transactions connected to derivatives[395] or transactions that are "securities financing transactions";[396] and many transactions of a technical nature.[397]

In practice, many derivatives transactions can "contribute to the price discovery process". In March 2020, a Financial Times article summed up what happens when traders use volatility as a proxy for risk: "[U]sing volatility as shorthand for risk means that when markets are calm, traders have carte blanche to buy securities. Conversely, when turbulence erupts, traders are forced to ratchet back their positions, exacerbating the very phenomenon they are responding to."[398]

Post-trade transparency in the EU. Under MiFID, dark pools and lit venues did not differ in the level of post-trade transparency. While there were exemptions from pre-trade transparency under a Commission Regulation[399] implementing MiFID, there were no exemptions regarding post-trade transparency.[400]

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392 Point (a) of Article 2 of Commission Delegated Regulation (EU) 2017/587.

393 Point (b) of Article 2 and point (1) of Article 1 of Commission Delegated Regulation (EU) 2017/587.

394 Point (1) of Article 1 of Commission Delegated Regulation (EU) 2017/587.

395 Points (c) and (g) of Article 2 of Commission Delegated Regulation (EU) 2017/587.

396 Point (h) of Article 2 and point (3) of Article 1 of Commission Delegated Regulation (EU) 2017/587. See Regulation (EU) 2015/2365 of the European Parliament and of the Council of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012. Point (11) of Article 3 of Regulation (EU) 2015/2365 (SFTR) on the definition of a "securities financing transaction" or "SFT".

397 Points (d), (f), (g) and (i) of Article 2 of Commission Delegated Regulation (EU) 2017/587. See also point (2) of Article 1 of Commission Delegated Regulation (EU) 2017/587.

398 Robin Wigglesworth, Coronavirus mayhem reflects phenomenon of 'schock-led' markets. Financial Times, 6 March 2020.

399 Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards record-keeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive.

400 See Article 29(2) of Regulation (EC) 1287/2006. See also Petrescu M, Wedow M (2017) p 16 footnote 37: "Dark pools and lit venues do not, however, differ in the level of post-trade trans-

MiFID was felt to have contained loopholes.[401] To close some of the loopholes, MiFID II required the use of approved publication arrangements (APAs)[402] "to improve the quality of trade transparency information published in the OTC space".[403]

MiFID II is complemented by MiFIR[404] that requires public post-trade disclosure. MiFIR lays down directly applicable post-trade transparency requirements for trading venues in respect of shares.[405] According to the main rule, market operators and investment firms operating a trading venue must make details of share transactions public "as close to real-time as is technically possible".[406]

Moreover, MiFIR lays down post-trade transparency requirements for investment firms where they trade in financial instruments traded on a trading venue. These post-trade transparency requirements apply not only to transactions executed on a trading venue but even to transactions executed via a systematic internaliser or OTC.[407] Investment firms must make public disclosures through an APA.[408] MiFID II defines the information that must be made public by an APA[409] and the way that an APA should make information public. According to MiFID II, an APA should make the required information public "as close to real time as is technically possible, on a reasonable commercial basis", and it should be made available "free of charge 15 minutes after the APA has published it".[410] Under Commission Delegated Regulation (EU) 2017/587, "as close to real time as is technically possible" customarily means "in any case within one minute of the relevant transaction" for transactions that take place during normal trading hours.[411]

Since not only trading venues but even investment firms have post-trade transparency obligations, transactions executed on an alternative venue or out-

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parency; all are currently required to report as close to real time as possible, at most within three minutes."

401 Recital 4 of Regulation (EU) 600/2014 (MiFIR).

402 Point (52) of Article 4(1) of Directive 2014/65/EU (MiFID II).

403 Recital 116 of Directive 2014/65/EU (MiFID II). See also recital 117.

404 Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

405 Recital 5 and Article 6 of Regulation (EU) 600/2014 (MiFIR); Article 12 of Commission Delegated Regulation (EU) 2017/587.

406 Article 6(1) of Regulation (EU) 600/2014 (MiFIR).

407 See, for example, point (g) of Article 64(2) of Directive 2014/65/EU (MiFID II).

408 Article 20(1) of Regulation (EU) 600/2014 (MiFIR).

409 Article 64(2) of Directive 2014/65/EU (MiFID II). See also recital 13 of Commission Delegated Regulation (EU) 2017/587.

410 Article 64(1) of Directive 2014/65/EU (MiFID II); Article 6(1) of Regulation (EU) 600/2014 (MiFIR).

411 Article 14 of Commission Delegated Regulation (EU) 2017/587.

side the rules of a trading venue will not escape post-trade transparency requirements. The transaction must be made public by a participating investment firm[412] or systematic internaliser.[413] If the transaction is between two investment firms, either on own account or on behalf of clients, the transaction must be made public through an APA by the seller.[414] The time limit basically is the same for transactions that take place on a trading venue[415] and transactions that take place outside a trading venue.[416] A single transaction must not be made public as multiple trades.[417]

There are few exemptions from post-trade transparency requirements. The transactions that benefit from the exemptions mainly are of a technical nature.[418]

MiFIR permits deferred publication only with the prior approval of the competent authority. In particular, "the competent authorities may authorise the deferred publication in respect of transactions that are large in scale compared with the normal market size" for the share.[419] ESMA was required to develop technical standards for deferred publication.[420] In 2015, ESMA published draft regulatory and implementing standards in a Final Report[421] that included a post-trading standard[422] and particular large in scale thresholds for deferred post-trade transparency in share trading.[423] Of the many regulatory technical standards (RTS) adopted by the Commission, Commission Delegated Regulation (EU) 2017/587[424] is particularly relevant for trading in shares, share trading venues, and systematic internalisers. It is based on the draft regulatory technical standards submitted by the ESMA to the Commission.[425]

412 Recital 15 of Commission Delegated Regulation (EU) 2017/587.
413 Recital 16 of Commission Delegated Regulation (EU) 2017/587.
414 Article 12(4) of Commission Delegated Regulation (EU) 2017/587.
415 Article 14(1) of Commission Delegated Regulation (EU) 2017/587.
416 Article 14(2) of Commission Delegated Regulation (EU) 2017/587.
417 Recital 17 and Article 12(6) of Commission Delegated Regulation (EU) 2017/587.
418 Article 13 of Commission Delegated Regulation (EU) 2017/587.
419 Article 7(1) of Regulation (EU) 600/2014 (MiFIR).
420 Article 7(2) of Regulation (EU) 600/2014 (MiFIR).
421 ESMA (2015).
422 Section 2.1.4 of ESMA (2015).
423 Chapter V of section 2.1.4 of ESMA (2015).
424 Commission Delegated Regulation (EU) 2017/587 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments and on transaction execution obligations in respect of certain shares on a trading venue or by a systematic internaliser.
425 Recital 20 of Commission Delegated Regulation (EU) 2017/587.

According to the main rule on post-trade transparency, information is required to be made available "as close to real time as possible" and it should be made available "as instantaneously as technically possible, assuming a reasonable level of efficiency and of expenditure on systems on the part of the person concerned". Moreover, the information should only be published close to the prescribed maximum time limit "in exceptional cases where the systems available do not allow for publication in a shorter period of time".[426]

While a high degree of transparency is regarded as essential,[427] it is recognised that deferrals from post-trade transparency obligations should be provided under some circumstances "to avoid the impairment of liquidity as an unintended consequence of obligations to disclose orders and transactions and thereby to make public risk positions".[428] Where competent authorities authorize the deferral of post-trade information, "all regulated markets, multilateral trading facilities and investment firms trading outside of trading venues" should be treated "equally and in a non-discriminatory manner".[429] Moreover, the post-trade transparency regime "should be appropriately calibrated to the market and applied in a uniform manner throughout the Union".[430]

The modalities of referrals and maximum time limits are set out in Commission Delegated Regulation (EU) 2017/587.[431]

Pre-trade transparency in the EU. The regulation of pre-trade and post-trade transparency in equities trading under MiFID strengthened demand for dark pools in the EU.[432] As regards pre-trade transparency requirements for regulated markets and MTFs, MiFID made it mandatory to disclose the bid and offer prices and depth of interest (volumes in the order book at different prices) on a continuous basis for equity and equity-like instruments.[433] Pre-trade transparency requirements increased risks for many market participants: "Such pre-trade transparency requirements increase the probability that information about larger orders in the order book can be detected by predatory traders, which could be costly to investors if it resulted in front running."[434] MiFID therefore permitted

426 Recital 12 of Commission Delegated Regulation (EU) 2017/587.
427 Recital 1 of Commission Delegated Regulation (EU) 2017/587.
428 Recital 2 of Commission Delegated Regulation (EU) 2017/587.
429 Recital 4 of Commission Delegated Regulation (EU) 2017/587.
430 Recital 9 of Commission Delegated Regulation (EU) 2017/587.
431 Article 15 of Commission Delegated Regulation (EU) 2017/587.
432 Petrescu M, Wedow M (2017) p 13.
433 Article 29(1) of Directive 2004/39/EC (MiFID).
434 Petrescu M, Wedow M (2017) p 13.

waivers from pre-trade transparency.[435] Waivers are important for traders that may need to protect orders from information leakage and front running by hiding some information from other market participants.

The pre-trade transparency and waiver regime was changed by MiFIR. Like MiFID, MiFIR lays down pre-trade transparency obligations[436] calibrated for different kinds of trading systems.[437] Competent authorities may waive the obligation for market operators and investment firms operating a trading venue under certain circumstances. MiFIR permits waivers for the following systems or orders:

- subject to the so-called volume cap mechanism,[438] systems in which the price is derived from a particular widely published and reliable reference price;[439]
- to some extent subject to the volume cap mechanism,[440] systems that formalise particular negotiated transactions;[441]
- orders that are large in scale compared with normal market size;[442] and
- orders held in an order management facility of the trading venue pending disclosure.[443]

To properly understand the MiFIR waiver regime, we can have a look at the earlier MiFID regime. The MiFID regime permitted the waiving of pre-trade disclosure obligations in the same contexts.[444] The waivers were thus based on order size (large-in-scale waivers), market model and transaction type (reference

435 Article 29(2) of Directive 2004/39/EC (MiFID). For implementing measures, see Article 29(3) of Directive 2004/39/EC (MiFID).

436 Article 3(1) of Regulation (EU) 600/2014 (MiFIR).

437 Article 3(2) of Regulation (EU) 600/2014 (MiFIR): "The transparency requirements referred to in paragraph 1 shall be calibrated for different types of trading systems including order-book, quote-driven, hybrid and periodic auction trading systems." See also Article 3 of Commission Delegated Regulation (EU) 2017/577.

438 First subparagraph of Article 5(1) of Regulation (EU) 600/2014 (MiFIR).

439 Article 4(1) of Regulation (EU) 600/2014 (MiFIR).

440 First subparagraph of Article 5(1) of Regulation (EU) 600/2014 (MiFIR).

441 Point (b) of Article 4(1) of Regulation (EU) 600/2014 (MiFIR). See also second subparagraph of Article 5(1).

442 Points (c) and (d) of Article 4(1) of Regulation (EU) 600/2014 (MiFIR).

443 Point (d) of Article 4(1) of Regulation (EU) 600/2014 (MiFIR).

444 Article 29 of Directive 2004/39/EC (MiFID); Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards record-keeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive.

price waivers and negotiated price waivers),[445] and orders held in an order management system by a regulated market or MTF pending disclosure to the market (order management waivers).[446]

This MiFID package of waivers formed a system where each waiver type addressed a particular concern. First, large orders are not only costly to execute immediately in the absence of sufficient liquidity but even particularly vulnerable to front running if they are subject to pre-trade transparency while sitting in the order book.[447] This made large-in-scale waivers necessary. Second, all transactions do not qualify for large-in-scale waivers. A reference price waiver covers all transactions on the venue. Since the MiFID regime permitted this waiver for the entire trading system and all orders in the order book regardless of size, most dark pools in Europe rely on this waiver.[448] Third, negotiated price waivers are useful for retail trading platforms or large pre-agreed block trades.[449] Fourth, the waiver from pre-trade transparency for orders held in an order management system facilitated the use of special hidden or part-hidden order types such as iceberg orders for large orders in lit order books. In iceberg orders, only a small part of the volume is displayed at one time. The MiFID regime thus enabled traders to hide information in lit order books.[450] This did not prevent algorithmic traders from developing methods to detect hidden volumes in lit order books.[451]

MiFIR imposed restrictions on the use of some of these waivers. While the use of the large-in-scale waiver is not restricted under MiFIR, the reference price and negotiated transaction waivers are subject to the volume cap mechanism or "double volume cap".[452] In other words, they are constrained by the usage of the reference price and negotiated price waivers on individual venues and on all venues in the EU.

The volume cap mechanism thresholds of 4%[453] and 8%[454] are likely to affect trading on dark pools for some instruments. In 2016, the volume traded on

445 Article 18(1) of Regulation 1287/2006 (implementing MiFID).
446 Article 18(2) of Regulation 1287/2006 (implementing MiFID).
447 Petrescu M, Wedow M (2017) p 13.
448 *Ibid.*, p 14.
449 *Ibid.*, p 14.
450 *Ibid.*, pp 13–14.
451 *Ibid.*, pp 13–14 and 20.
452 See *ibid.*, p 15 describing the double volume cap mechanism. Article 5(1) of Regulation (EU) 600/2014 (MiFIR).
453 Point (a) of the first subparagraph of Article 5(1) of Regulation (EU) 600/2014 (MiFIR).
454 Point (b) of the first subparagraph of Article 5(1) of Regulation (EU) 600/2014 (MiFIR).

dark pools accounted for over 8% of the total value traded in equities in the EU.[455]

The thresholds can affect the structure of the European dark pool market. Since the large-in-scale waiver is not affected but the use of some waivers is limited, the new restrictions under MiFIR are "likely to have different effects on the market share of different dark pools, depending on whether the venues cater for large orders". The volume cap mechanism "might lead to a shift towards larger trades in dark pools". Moreover, traders may not be as free as before to place small orders in the dark. Consequently, the market share and competitiveness of dark pools focused on small-order venues might suffer. This might lead to "consolidation in the dark pools serving small-sized orders".[456]

The regulatory technical standards have been laid down in Commision Delegated Regulation 2017/577. The Commission Delegated Regulation defines, for example:

- how market operators and investment firms operating a trading venue shall make public the range of bid and offer prices and the depth of trading interest at those prices;[457]
- the most relevant market in terms of liquidity;[458]
- the specific characteristics of negotiated transactions[459] and negotiated transactions subject to conditions other than the current market price;[460]
- orders that are large in scale;[461] and
- the type and minimum size of orders held in an order management facility.[462]

There are particular pre-trade transparency requirements under MiFIR for systematic internalisers and investment firms when they trade in shares OTC (that is, outside a trading venue)[463] and in sizes up to standard market size. These par-

455 Petrescu M, Wedow M (2017) pp 15 and 22. See also the monthly LiquidMetrix Guide to European Dark Pools.
456 Petrescu M, Wedow M (2017) pp 15–16.
457 Article 3 of Commission Delegated Regulation (EU) 2017/577.
458 Article 4 of Commission Delegated Regulation (EU) 2017/577.
459 Article 5(1) of Commission Delegated Regulation (EU) 2017/577.
460 Article 6 of Commission Delegated Regulation (EU) 2017/577.
461 Article 7 of Commission Delegated Regulation (EU) 2017/577.
462 Article 8 of Commission Delegated Regulation (EU) 2017/577.
463 Title III, Articles 14–17 of Regulation (EU) 600/2014 (MiFIR).

ticular requirements thus do not apply when systematic internalisers deal in sizes above standard market size.[464]

The main rule is that investment firms must make public firm quotes provided that there is a liquid market: "Investment firms shall make public firm quotes in respect of those shares, depositary receipts, ETFs, certificates and other similar financial instruments traded on a trading venue for which they are systematic internalisers and for which there is a liquid market."[465] In the absence of a liquid market, systematic internalisers shall disclose quotes to their clients upon request.[466]

The Commission has defined these requirements in greater detail in the Commission Delegated Regulation as required by MiFIR.[467] The Delegated Regulation addresses: arrangements for the publication of a firm quote;[468] prices reflecting prevailing market conditions;[469] and the standard market size.[470]

There are particular rules on access to quotes. In effect, they can make the business of HFT firms more difficult. The main rule is that systematic internalisers may decide the clients to whom they give access to their quotes. They may do this "on the basis of their commercial policy and in an objective non-discriminatory way" and on the basis of "clear standards for governing access to their quotes".[471] Moreover, to limit the risk of exposure to multiple transactions from the same client, systematic internalisers may limit in a non-discriminatory way the number of transactions from the same client which they undertake to enter at the published conditions.[472]

Conclusion. In the EU, the main design principle for the regulation of dark pools is ensuring a level playing field for venues and investment firms. The most important issues relate to pre-trade and post-trade transparency. MiFIR provides for a waiver regime subject to a volume cap mechanism. MiFIR is expected to influence the structure of the dark pool market. The regulation of dark pools is

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464 Article 14(2) of Regulation (EU) 600/2014 (MiFIR): "This Article and Articles 15, 16 and 17 shall apply to systematic internalisers when they deal in sizes up to standard market size. Systematic internalisers shall not be subject to this Article and Articles 15, 16 and 17 when they deal in sizes above standard market size."

465 First subparagraph of Article 14(1) of Regulation (EU) 600/2014 (MiFIR).

466 Second subparagraph of Article 14(1) of Regulation (EU) 600/2014 (MiFIR).

467 Article 17(3) of Regulation (EU) 600/2014 (MiFIR).

468 Article 9 of Commission Delegated Regulation (EU) 2017/577.

469 Article 10 of Commission Delegated Regulation (EU) 2017/577.

470 Article 11 of Commission Delegated Regulation (EU) 2017/577.

471 Article 17(1) of Regulation (EU) 600/2014 (MiFIR).

472 Article 17(2) of Regulation (EU) 600/2014 (MiFIR).

influenced by the regulation of so-called systematic internalisers (section 3.4.7). The interests of issuer-firms have not mattered.

3.4.7 The Regulation of Systematic Internalisers in EU Law

A dark pool is not a normative concept in EU law. Whether a dark pool is permitted or not depends on the facts of the case, that is, the dark pool. Authorisation requirements for multilateral trading facilities (MTFs) or investment firms may apply. A dark pool is not regarded as an MTF if the operator of a dark pool is regarded as a systematic internaliser.

In the EU, the definition of a multilateral trading facility (MTF) under MiFID II does not include "systematic internalisers". The operator or a dark pool or any other alternative venue can thus choose to act as a systematic internaliser.[473] Since this term can influence market organisation, we can have a brief look at the relevant chain of definitions.

The first definition in the chain is "a multilateral trading system" or "multilateral system". A "multilateral system" means "any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system".[474] This definition is quite a broad one as it refers to "any system or facility" and the rather broad definition of "financial instruments".[475] However, the definition is limited to "interaction in the system" of "multiple third-party buying and selling trading interests".

Such a multilateral trading system for the trading of shares can be a "regulated market"[476] or a "multilateral trading facility". A "multilateral trading facility" means "a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract in accordance with Title II of [MiFID II]".[477] The most important part of the definition is the existence of "non-discretionary rules".[478] The operation of such a multilateral system requires an authorisation.[479]

473 Recital 17 of Directive 2014/65/EU (MiFID II).
474 Point (19) of Article 4(1) of Directive 2014/65/EU (MiFID II).
475 Section B of Annex I to Directive 2014/65/EU (MiFID II).
476 Point (21) of Article 4(1) of Directive 2014/65/EU (MiFID II).
477 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II).
478 Article 19(1) of Directive 2014/65/EU (MiFID II).

Now, the activity of "systematic internalisers" is not regarded as the operation of a "multilateral trading facility". A systematic internaliser has been defined in MiFID II as "an investment firm which, on an organised, frequent, systematic and substantial basis, deals on own account by executing client orders – outside [regulated trading venues] and without operating a multilateral system".[480] A systematic internaliser is thus "an investment firm" and needs an authorisation.[481] The activity of a systematic internaliser is done "on an organised, frequent, systematic and substantial basis". However, the activity of a systematic internaliser must not be based on "non-discretionary rules", and "multiple third-party buying and selling trading interests" must not "interact in the system".

There is a more detailed definition in Commission Delegated Regulation (EU) 2017/565.[482] According to the recitals of the Delegated Regulation, "a systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue. A systematic internaliser should not consist of an internal matching system which executes client orders on a multilateral basis, an activity which requires authorisation as a multilateral trading facility (MTF). An internal matching system in this context is a system for matching client orders which results in the investment firm undertaking matched principal transactions on a regular and not occasional basis."[483] The key difference between the operation of a multilateral trading facility and the activities of a systematic internaliser is thus that a systematic internaliser must not have an internal matching system matching orders on a multilateral basis.

479 Article 5(1) of Directive 2014/65/EU (MiFID II): "Each Member State shall require that the provision of investment services and/or the performance of investment activities as a regular occupation or business on a professional basis be subject to prior authorisation in accordance with this Chapter. Such authorisation shall be granted by the home Member State competent authority designated in accordance with Article 67." Article 5(2) of Directive 2014/65/EU (MiFID II): "By way of derogation from paragraph 1, Member States shall authorise any market operator to operate an MTF or an OTF, subject to the prior verification of their compliance with this Chapter."
480 Point (20) of Article 4(1) of Directive 2014/65/EU (MiFID II). See also recital 17 of Directive 2014/65/EU (MiFID II) on the definition of systematic internalisers. A "trading venue" is defined in point (24) of Article 4(1) of Directive 2014/65/EU (MiFID II).
481 Article 5(1) of Directive 2014/65/EU (MiFID II): "Each Member State shall require that the provision of investment services and/or the performance of investment activities as a regular occupation or business on a professional basis be subject to prior authorisation in accordance with this Chapter. Such authorisation shall be granted by the home Member State competent authority designated in accordance with Article 67."
482 See Article 12 of Regulation (EU) 2017/565.
483 Recital 19 of Regulation (EU) 2017/565.

One can draw the conclusion that systematic internalisers cannot become alternative venues and functional equivalents to stock exchanges.

3.4.8 The Regulation of High-Frequency Trading

It is useful to have a brief look at the regulation of high-frequency trading (HFT). Any alternative venue designed to foster the interests of issuer-firms should address the problem of HFT.

Regulators in the US and the EU addressed HFT after the Flash Crash in May 2010. The market share of HFT in equity trading decreased due to regulation, increased competition, rising costs, and the emergence of alternative trading platforms.[484]

The regulation of HFT in the EU. In the EU, MiFID II imposed stricter requirements on trading venues and market participants that engage in algorithmic or high-frequency trading.

The provisions addressing algorithmic trading are motivated in the recitals of MiFID II in relatively great length. It is recognised that "[m]any market participants now make use of algorithmic trading" and that "[r]isks arising from algorithmic trading should be regulated".[485] The particular characteristics of high-frequency algorithmic trading[486] have given rise to characteristic problems[487] that MiFID II is designed to address "by a combination of measures and specific risk controls directed at firms that engage in algorithmic trading or high-frequency algorithmic trading techniques, those that provide direct electronic access, and other measures directed at operators of trading venues that are accessed by such firms".[488]

These measures include, first, the duty of investment firms and trading venues to ensure that "robust measures are in place to ensure that algorithmic trading or high-frequency algorithmic trading techniques do not create a disorderly market and cannot be used for abusive purposes"[489] and, second, the duty of trading venues to ensure that "the fee structures of trading venues are transparent, non-discriminatory and fair and that they are not structured in such a way as to promote disorderly market conditions". Third, it is stated in the recitals that

484 Kaya O (2016) p 2.
485 Recital 59 of Directive 2014/65/EU (MiFID II).
486 Recital 61 of Directive 2014/65/EU (MiFID II).
487 Recital 62 of Directive 2014/65/EU (MiFID II).
488 Recital 63 of Directive 2014/65/EU (MiFID II).
489 Recital 64 of Directive 2014/65/EU (MiFID II).

"Member States should also be able to allow trading venues to impose higher fees for placing orders that are subsequently cancelled or on participants placing a high ratio of cancelled orders and on those operating a high-frequency algorithmic trading technique in order to reflect the additional burden on system capacity without necessarily benefitting other market participants".[490] Fourth, it is regarded as "appropriate to ban the provision of direct electronic access to markets by investment firms for their clients where such access is not subject to proper systems and controls".[491] Fifth, all orders generated by algorithmic trading must be flagged.[492] Sixth, "investment firms that engage in algorithmic trading to pursue a market making strategy should have written agreements in place with trading venues clarifying their obligations to provide liquidity to the market".[493] Seventh, some HFT practices could constitute market abuse.[494]

MiFID II applies to high-frequency trading in shares even where the trader deals on own account.[495] Article 17 of MiFID II lays down the key obligations. For example, MiFID II requires "speed bumps that artificially slow down the trade order speeds, order-to-trade ratios that prevent overly rapid and frequent submitting and cancelling of orders as well as systems and risk controls to ensure resilience of venues. Also included in MiFID 2 are direct market access limits and algorithm disclosure requirements for HFT firms."[496]

The regulation of HFT in the US. In the US, the SEC has been slower in addressing HFT regulation. In March 2018, the SEC voted to adopt a "Transaction Fee Pilot"[497] that will allow it to analyze the effects of stock exchange transaction fee and rebate pricing models on broker buy and sell order routing and trade execution quality. Big US exchanges such as the NYSE have objected to the pilot because they fear that it would undermine their "maker-taker" system of fees and rebates. According to this system, exchanges pay rebates for some orders and charge fees for others.[498]

490 Recital 65 of Directive 2014/65/EU (MiFID II).
491 Recital 66 of Directive 2014/65/EU (MiFID II).
492 Recital 67 of Directive 2014/65/EU (MiFID II).
493 Recital 113 of Directive 2014/65/EU (MiFID II).
494 Recital 68 of Directive 2014/65/EU (MiFID II).
495 Article 2(1) of Directive 2014/65/EU (MiFID II): "This Directive shall not apply to: … (d) persons dealing on own account in financial instruments … unless such persons: … (iii) apply a high-frequency algorithmic trading technique; …" For the definition of "algorithmic trading" and "high-frequency algorithmic trading technique", see points (39) and (40), respectively, of Article 4(1) of Directive 2014/65/EU (MiFID II).
496 Kaya O (2016) p 4.
497 Rule 610T of Regulation NMS.
498 SEC Release No. 34 – 82873 (Transaction Fee Pilot for NMS Stocks), sections II.A and V.A.1.

The SEC has already taken some steps in this area. The SEC has: revamped single-stock circuit breakers (the function of which is to pause trading in a given NMS stock across US equity markets for a five-minute period in the event that the stock experiences a significant price decline over the preceding five minutes); instituted the Limit-Up Limit-Down Rule; passed Regulation Systems Compliance and Integrity; and imposed stringent compliance and monitoring requirements on most trading platforms.[499]

The SEC aims to do more. It aims to: introduce an anti-disruptive trading rule; improve risk management practices for trading algorithms; and enforce stricter use of its core tool of registration and oversight.[500]

3.4.9 Conclusions

The market share of alternative trading mechanisms grew after the turn of the millennium for several reasons. Alternative trading mechanisms were generally made possible by digitalisation. Digitalisation also changed the revenue models of the operators of trading venues. Competition for listings was largely replaced by competition for trading volume with new trading venues trying to increase their share of trading in the most traded stocks. For this purpose, stock exchanges courted high-volume customers such as high-frequency traders. High-frequency traders benefited from one-sided liquidity and practiced front running. To avoid front running, other large customers turned to dark pools. Dark pools obtained a large market share. Large broker-dealers could use trade internalisation. New trading venues could even specialise in different customer segments.

The growth of alternative trading mechanisms and trade fragmentation was facilitated by regulation. Regulation NMS is regarded as the watershed event in the US. In the EU, the focus was on creating a level playing field for trading venues and on facilitating cross-border business. The problem of HFT was addressed

499 Morelli M (2017) p 216. For circuit breakers, see SEC Release No. 34 – 62252 (June 10, 2010) (Order Granting Accelerated Approval to Proposed Rule Changes Relating to Trading Pauses Due to Extraordinary Market Volatility); SEC Release No. 34 – 67091 (May 31, 2012) (Order Approving the NMS Plan to Address Extraordinary Market Volatility). For limit-up limit-down price bands, see FINRA Rules, at Rule 6190; NMS Plan to Address Extraordinary Market Volatility as amended by SEC Approval Order, SEC Release No. 34 – 77679 (April 21, 2016). For monitoring, see SEC Release No. 34 – 73639 (November 19, 2014) (Regulation Systems Compliance and Integrity), 79 FR 72252 (December 5, 2014) (SCI Adopting Release).

500 Kaya O (2016) p 4; Morelli M (2017) pp 217 and 220.

in the EU by waivers from pre-trade and post-trade transparency, rules on algorithmic trading, and rules on artificially slowing down trade order speeds.

Alternative trading mechanisms emerged because of competition for trading volume between various players in the financial industry. Existing regulation mainly seems to serve the interests of the operators of trading venues and high-volume traders, or address problems created by regulation.

Alternative trading mechanisms did not emerge because of the needs of issuer-firms. The needs of issuer-firms have not mattered so far. The existing regulation of alternative trading mechanisms therefore hampers the development of alternative trading mechanisms designed to benefit issuer-firms. A new regulatory regime would be necessary in particular to create new secondary markets for illiquid stocks such as shares in SMEs and growth firms. SME exchanges emerged as an alternative designed to address the needs of such issuer-firms (section 3.5).

3.5 SME Exchanges

3.5.1 General Remarks

The emergence of particular SME exchanges, that is, exchanges or market segments intended to attract young growth companies especially in the technology sector, had little connection to the emergence of alternative trading venues (sections 3.3 and 3.4). Its drivers were the dotcom boom, concerns about growth and employment after the financial crisis of 2007–2009, the growth of emerging markets, and generally competition between stock exchange operators. SME exchanges are a sub-category of traditional exchanges rather than examples of alternative trading venues. While SME exchanges have helped many firms, they have not managed to create enough companies with publicly-traded shares.

The function of SME exchanges for SMEs. According to a World Bank study,[501] SME exchanges have a function for SMEs as SMEs need capital and various kinds of services.

SME's need equity financing: "Equity financing can help SMEs get beyond some of the constraints associated with bank financing because it is longer term, does not need to be paid back, and increases an SME's ability to raise

501 Harwood A, Konidaris T (2015).

bank financing and take on debt."[502] Equity financing can be provided first by venture capital investors and then by market investors via an SME exchange.

Investors provide different ancillary services to SMEs. While a venture capital investor can "help the entrepreneur obtain strategic advice, technology, or support" and "help the SME improve its overall operations, including governance and financial accounts",[503] raising capital from market investors via an SME exchange is "appropriate when the SME is less interested in obtaining management assistance or restructuring but needs capital to grow".[504]

One can distinguish between the core and ancillary services that an SME exchange provides to the issuer. There are two core services in the light of the World Bank study.

First, an SME exchange can provide access to capital: "By appealing to a broader, more diverse investor base, an IPO can provide access to capital without requiring the SME to relinquish majority control. SME exchanges link issuers requiring long-term financing with a diverse set of investors comfortable with taking equity market risk by providing an infrastructure and regulatory framework that addresses the key risks for both."[505]

Second, an SME exchange facilitates secondary trading that can foster the interests of the firm: "It provides early-stage financiers … with an exit vehicle, which can, in turn, encourage them to provide more early-stage financing from the comfort that having an exit provides, and allows them to recycle their investment."[506]

Of these two core services, the second seems to be more important as has been pointed out by Bengt Holmström: "Start-ups, family businesses and other companies that list themselves for the first time on a stock exchange do raise substantial amounts of money at times, but little of it goes into the firm. The purpose is usually to allow entrepreneurs and family members to reduce their risk exposure, or resolve conflicts of interest that are common among closely held firms with large shareholders."[507] SEC Chairman Jay Clayton said that "public equity markets—e. g., IPOs—are being used more for liquidity by venture capital and private equity investors than for accessing new growth capital".[508]

The core services are complemented by various kinds of ancillary services ranging from a signalling effect to education. An SME exchange listing has a sig-

502 *Ibid.*, p 13.
503 *Ibid.*. See also OECD (2015c) p 110; Ibrahim DM (2013) pp 254–255.
504 Harwood A, Konidaris T (2015) p 13.
505 *Ibid.*, p 13.
506 *Ibid.*, p 13.
507 Holmström B (2015) p 7.
508 Clayton J (2019).

nalling effect as it can improve the perceived characteristics or reputation of the firm, reduce the perceived risk exposure of the parties that do business with the firm, and increase product sales.[509] The exchange operator can even actively provide education as an ancillary service. This can be illustrated with Euronext. In September 2015, Euronext launched TechShare, a 10-month educational and mentoring programme aimed at familiarising tech company CEOs with the financial markets. In 2017, Euronext launched FamilyShare, a dedicated programme offering support and coaching to unlisted family businesses.[510]

Demand for marketplaces is two-sided as both issuers and investors need marketplaces. Since the number of IPOs is rather low, the potential demand for marketplaces that provide relevant core and ancillary services and the actual supply of marketplaces do not meet.[511]

Cases. Many SME exchanges were inspired by the success of National Association of Securities Dealers Automated Quotation or NASDAQ.[512] Founded in 1971, Nasdaq introduced all-electronic trading and attracted young growth companies such as Microsoft, Apple, Cisco, Oracle, and Dell. Nasdaq was made famous by the dotcom boom.

However, it turned out to be difficult to copy the Nasdaq concept and build successful SME exchanges in other countries.[513] The difficulties can be illustrated with the short history of the German Neuer Market and the French Nouveau Marché.

Neuer Markt was launched by Deutsche Börse AG in April 1997.[514] It prospered during the dotcom era and peaked in 2000. When interest in the high-tech and telecom sector dried up, Deutsche Börse AG closed the Neuer Markt segment in 2003 (see also section 5.4.7 on Neuer Markt and Scale).

Founded in 1996, the Nouveau Marché was intended as Nasdaq's French equivalent. Most of the companies listed on the Nouveau Marché were in the

509 Harwood A, Konidaris T (2015) p 13.

510 Euronext, 2018 Registration Document including the Annual Financial Report, p 28.

511 In contrast, the EU IPO Task Force regarded SMEs as the supply side and investors as the demand side. European IPO Task Force (2015) pp 23 and 35.

512 OECD (2015c) p 129: "Historically, new markets have represented a source of equity financing for young high-tech companies. In fact, the prototypical model of an SME exchange was NASDAQ in the United States, founded in 1971, which was heavily weighted toward new and high technology companies, although it has then evolved into the listing place of choice for many of the largest companies in the world."

513 Harwood A, Konidaris T (2015) p 5; World Federation of Exchanges (2018) p 9; OECD (2015c) p 14.

514 See Harrer H, Erwe P (1998); Vitols S (2001); Burghof HP, Hunger A (2003); Gilson RJ, Hansmann H, Pargendler M (2011) p 504.

technology sector. Like the Neuer Markt, Nouveau Marché suffered from the bursting of the dotcom bubble in 2000. A single regulated market was created to replace Nouveau Marché and two other market segments in 2005.

Some SME markets have done well. In London, the Alternative Investment Market (AIM) has become one of the most successful SME markets.[515] It has achieved a high number of listings but mostly failed to create high returns for late investors.[516] Successful markets can vary greatly in terms of the number of listed companies and market capitalisation. Other SME markets that have done well include, for example, Euronext Growth (of Euronext, a pan-European exchange), KOSDAQ (of Korea Exchange) and ChiNext (of Shenzhen Stock Exchange) as well as TSX Venture Exchange (of TMX Group, Canada), JASDAQ (of Japan Exchange Group), its sister exchange Mothers (the Market of the high-growth and emerging stocks), Taipei Exchange (Taiwan), and New Connect (of Warsaw Stock Exchange).[517] SME markets have found fertile ground in emerging markets.[518]

SME exchanges after the financial crisis of 2007–2009. The slow recovery after the financial crisis of 2007–2009 made policymakers pay more attention to the role of SMEs as engines of growth and employment.

Since bank financing is the primary source of funding for most SMEs, policymakers and regulators found it necessary to focus on the access of SMEs to capital market financing and on the role of SME exchanges.[519] For example, the JOBS Act of 2012 was intended to increase the liquidity of SME equity markets in the US,[520] and MiFID II that was adopted in 2014 strengthened the protection of investors and provided for a new type of trading venue designed to cater specifically for SME issuers.[521]

Policymakers' recommendations influenced subsequent regulation. In the US, the October 2011 report of the IPO Task Force was followed by the Jumpstart Our Business Startups (JOBS) Act of 2012. In the EU, elements of the European

515 Harwood A, Konidaris T (2015) p 9; World Federation of Exchanges (2018) p 10, Table 1.
516 Claer Barrett, Aim – 20 years of a few winners and many losers: Why has London's junior market performed so poorly? Financial Times, 19 June 2015.
517 World Federation of Exchanges (2018) p 10, Table 1; Harwood A, Konidaris T (2015) p 11, Table 2; OECD (2015c) p 131.
518 OECD (2015c) p 132–133.
519 World Federation of Exchanges (2018) p 4. See also IPO Task Force (2011); Weild D, Kim E, Newport L (2013) (OECD); Shinozaki S (2014) (Asian Development Bank); European IPO Task Force (2015); Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final; OECD (2015c); Harwood A, Konidaris T (2015) (World Bank).
520 OECD (2015c) p 134.
521 *Ibid.*

IPO Task Force's recommendations of 2015 were adopted in the Capital Markets Union action plan that followed MiFID II.

Emerging regulation. In this context, the main design principle applied in the US and the EU is that SME exchanges are governed by a one-size-fits-all regulatory regime that governs all stock exchanges. While this does not prevent the founding of SME exchanges as market segments, junior markets, or standalone exchanges, such SME exchanges cannot be fundamentally different from traditional main markets. SME exchanges are designed as a sub-category of the traditional stock exchange that is primarily designed for large established issuers. The main regulatory regime is complemented by exceptions and waivers. Exceptions and waivers are regarded as necessary in both the US and the EU. The regulation of SME exchanges seems to be work in progress.

3.5.2 The Emerging Regulation of SME Exchanges in the US

The Order Handling Rules of 1997 and Regulation ATS of 1998 reduced trading spreads and, indirectly, the number of small company IPOs in the US.[522] IPO levels are low even for many other reasons. To address this problem, there are proposals for regulatory change. Some actions were taken in the JOBS Act of 2017.

The October 2011 report of the IPO Task Force contained four high-level recommendations for policymakers: (1) provide an "on-ramp" for emerging growth companies using existing principles of scaled regulation (whereby qualified companies would be given up to five years from the date of their IPOs to scale up to full regulatory compliance); (2) improve the availability and flow of information about smaller cap companies for investors before and after an IPO (by increasing the availability of company information and research); (3) lower the capital gains tax rate for investors who purchase shares in an IPO and hold these shares for a minimum of two years; and (4) educate issuers about how to succeed in the new capital markets environment.[523]

The subsequent JOBS Act of 2012 introduced the notion of an "emerging growth company". The JOBS Act defines an emerging growth company as an issuer with total annual gross revenues of less than US$1.07 billion (originally US $1.0 billion) in its last fiscal year before the IPO. An issuer that qualifies as an emerging growth company benefits from a temporary transition period during which an issuer's regulatory requirements phase in gradually (on-ramp). It is

522 Weild D, Kim E, Newport L (2013) p 4.
523 IPO Task Force (2011) pp 2–3.

then exempted from certain disclosure, auditing, accounting, and other requirements that would apply otherwise.[524]

In principle, the Securities Exchange Act of 1934 would make it possible to found new kinds of exchanges provided that the general requirements for all exchanges are met. This was the case with LTSE in 2019.[525] The SEC summed up its general requirements in its findings as follows:

"[T]he Commission finds that the proposed rules of LTSE are consistent with Section 6 of the Act in that, among other things, they are designed to: (1) assure fair representation of the exchange's members in the selection of its directors and administration of its affairs and provide that, among other things, one or more directors shall be representative of investors and not be associated with the exchange, or with a broker or dealer; (2) prevent fraudulent and manipulative acts and practices, promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, and remove impediments to and perfect the mechanisms of a free and open market and a national market system; (3) not permit unfair discrimination between customers, issuers, or dealers; and (4) protect investors and the public interest. The Commission also finds that the rules of LTSE are consistent with Section 11 A of the Act. Finally, the Commission finds that LTSE's proposed rules do not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act."[526]

3.5.3 The Emerging Regulation of SME Exchanges in the EU

The European IPO Task Force recommended actions in its 2015 report.[527] To some extent, they resembled the 2011 recommendations of the US IPO Task Force.

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524 World Federation of Exchanges (2018) p 5; Latham & Watkins LLP (2020) p 12.

525 See, for example, SEC Release No. 34–85828 (May 10, 2019) (In the Matter of the Application of Long Term Stock Exchange, Inc. for Registration as a National Securities Exchange. Findings, Opinion, and Order of the Commission), I: "Pursuant to Sections 6(b) and 19(a) of the Act, the Commission shall by order grant an application for registration as a national securities exchange if the Commission finds, among other things, that the proposed exchange is so organized and has the capacity to carry out the purposes of the Act and can comply, and can enforce compliance by its members and persons associated with its members, with the provisions of the Act, the rules and regulations thereunder, and the rules of the exchange."

526 *Ibid.*, II.

527 European IPO Task Force (2015) pp 52–58. See also FESE (2019).

The European IPO Task Force's five high-level recommendations were: (1) "Create a more flexible regulatory environment for small and mid-cap quoted companies, also known as 'Emerging Growth Companies', including lowering the barriers to entry and the cost of equity capital." (2) "Relax constraints that restrict investors' ability to access IPO markets & to invest in venture capital / private equity." (3) "Improve the ecosystem of IPOs and market structures to better serve companies at different stages of growth and different types of investors." (4) "Create an equity culture in Europe, including the provision of education and non-legislative initiatives."[528] (5) "Improve tax incentives for investment into IPOs and equity more generally."

Each high-level recommendation was complemented by a list of more specific aims. One of the more specific aims that complemented the first high-level recommendation was: "Promote the concept of 'Think Small First' in EU financial regulation affecting Emerging Growth Companies". Earlier, the principle of "Think Small First" had influenced the UK Company Law Reform of 2006 (section 2.4.9).[529] The European Commission emphasised the importance of the "Think Small First" principle in its 2008 Small Business Act.[530] According to the European Commission, this principle means that policy-makers should consider and take into account the needs and interests of SMEs from the earliest moment in policy formulation.

One of the specific aims complementing the second high-level recommendation was creating "a single market for retail investors to directly access public equity markets cross-border in Europe (in addition to investment with financial intermediation)".[531]

The European IPO Task Force gave its recommendations in 2015 after the adoption of MiFID II in 2014. MiFID II therefore did not solve the problems and there is more work to do.

In any case, the first high-level recommendation was connected to the regulation of SME growth markets as a particular category of multilateral trade facilities (MTFs) under MiFID II.[532] SME growth markets are subject to lighter regulatory requirements depending on the preferences of each Member State.[533] The

528 See also FESE (2019) p 23 and OECD (2015c) p 130: "Evidence shows that the lack of an equity culture represents a greater impediment in Europe than in the US."

529 See [the UK] Department of Trade and Industry (2005); [the UK] Companies Act 2006.

530 "Think Small First" – A "Small Business Act" for Europe. Communication from the Commission, COM(2008) 394 final.

531 European IPO Task Force (2015) p 53.

532 Point 12 of Article 4(1) of Directive 2014/65/EU (MiFID II).

533 Article 33(3) of Directive 2014/65/EU (MiFID II).

operator of the market nevertheless is not exempted from other obligations under MiFID II relevant to the operation of MTFs.[534]

The common regulatory standards for SME growth markets are a compromise between the various regulatory goals of MiFID II. According to the recitals of MiFID II,[535] its provisions on SME growth markets are intended to:

- facilitate access to capital for smaller and medium-sized enterprises (SMEs);
- facilitate the further development of specialist markets that aim to cater for the needs of smaller and medium-sized issuers;
- create within the MTF category a new sub-category of SME growth market;
- through creation of a new sub-category of SME growth market and the registration of those markets, raise their visibility and profile;
- through creation of a new sub-category of SME growth market and the registration of those markets, aid the development of common regulatory standards in the Union for those markets;
- through future regulation, further foster and promote the use of that market so as to make it attractive for investors;
- through future regulation, provide a lessening of administrative burdens;
- through future regulation, provide further incentives for SMEs to access capital markets through SME growth markets;
- provide sufficient flexibility to be able to take into account the current range of successful market models that exist across Europe;
- strike the correct balance between maintaining high levels of investor protection, which are essential to fostering investor confidence in issuers on those markets, while reducing unnecessary administrative burdens for issuers on those markets;
- provide a basis for more detailed SME growth market requirements such as those relating to criteria for admission to trading on such a market would be further prescribed in delegated acts or technical standards.

In the European Commission's Capital Markets Union action plan, these numerous goals were reduced to just two. The Commission promised to "ensure through the implementation of MiFID II that the requirements applying to [SME growth markets] strike the right balance between providing sufficient investor protection and avoiding unnecessary administrative burden."[536]

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534 Article 33(4) of Directive 2014/65/EU (MiFID II).

535 Recitals 132–133 of Directive 2014/65/EU (MiFID II).

536 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 2.

The same two SME-related goals influenced the new Prospectus Regulation. For example, the purpose of the Prospectus Regulation is to establish "a specific proportionate EU Growth prospectus regime which is available to such companies. A proper balance should be struck between cost-efficient access to financial markets and investor protection when calibrating the content of an EU Growth prospectus."[537]

Conclusion. Policymakers believe that many SMEs could choose to have publicly-traded shares. The US and the EU are pursuing different policy options for this purpose. In the US, the focus is on the SME in the light of the fact that "emerging growth companies" are exempt from some requirements under securities law. In the EU, the focus is on the venue in the light of the fact that MiFID II provides for "SME growth markets".

3.6 Conclusions

If there are too few companies with publicly-traded shares, the problem might have a connection to how stock exchanges work and how they are regulated. This seems to be the case.

Early stock exchanges fostered the interests of the state, firms, and traders. In contrast, the operators of modern stock exchanges are for-profit enterprises. Neither their business models nor the regulation of stock exchanges are designed with the interests of issuer-firms in mind.

The emergence of alternative marketplaces has not helped. The drivers of this phenomenon include digitalisation, regulatory changes, competition between trading venues for trading volume, and addressing front running or one-sided liquidity either as an opportunity or as a threat.[538] The interests of issuer-firms remain absent in the business and regulation of alternative marketplaces. The rise of broker-dealer order internalisation and dark pools in particular is connected to the threat of front running and one-sided liquidity, competition for large orders, and the general trend of concentration of intermediaries.

This said, the role of SMEs and growth firms was recognised in the development of SME exchanges. SME exchanges grew because of the dotcom boom and start-up hype, concerns about economic growth and employment after the financial crisis of 2007–2009, the growth of emerging markets, and generally competition between exchanges. However, SME exchanges are traditional rather than

537 Recital 51 of Regulation 2017/1129 (Prospectus Regulation).

538 See even Fox MB, Glosten LR, Rauterberg GV (2019) p 14.

alternative marketplaces. The default regulatory framework of an SME exchange is that of a traditional stock exchange. The regulation of SME exchanges basically means adopting exceptions to the main regulatory framework that governs traditional stock exchanges. The fundamental problems of SME exchanges and their regulation may reflect the fact that the mechanisms of traditional stock exchanges are designed for mature companies with liquid shares. The shares of SMEs are inherently illiquid.

In the light of the long-term decline in the number of new listings, supply and demand do not seem to meet as far as the product "trading venue for stocks" is concerned. On the issuer side, there is a shortage of trading venues as existing trading venues are not aligned with the interests of firms. Retail investors suffer from a shortage of issuers.

The regulation of stock exchanges should even foster the interests of non-financial issuer-firms. It should not be limited to fostering the interests of trading venue operators, institutional investors, high-volume traders, and high-frequency traders.

SME exchanges can help to bring more companies to public markets. However, the use of traditional SME exchanges does not seem to be enough to cure the fundamental problem. There should be alternative trading venues for issuers that are SMEs. In this book, the development of "microexchanges" as a new kind of trading venue is proposed as one of the possible ways to address the lack of proper trading venues for SMEs' stocks (Chapter 8).

One may ask whether the development of marketplaces that foster the interests of issuer-firms rather than traders and marketplaces designed for SMEs would lead to market fragmentation and reduce liquidity. This question may not be the right question to ask. There is already a trend of market fragmentation and a new approach to liquidity regardless of the interests of issuer-firms.

Since different investors and traders have different needs, there is now "horizontal differentiation between venues in terms of the services offered and the clients targeted".[539] The existence of different kinds of marketplaces ranging from main exchanges to dark pools indicates that market fragmentation is now part of the normal evolution of stock exchanges. The phenomenon of concentration has moved from trading venues to intermediaries with some market players becoming TBTF.

At the same time, regulatory actions intended to ensure liquidity have increasingly contributed to fragmentation rather than concentration. In the US, one of the main drivers of fragmentation was Regulation NMS that created the

539 Petrescu M, Wedow M (2017) p 7.

national stock market with increased liquidity. However, if one assumes that liquidity means the same thing to all market participants and is the core service of stock exchanges that can reduce fixed costs per transaction by increasing trading volume, two-sided network effects should lead to the concentration of stock exchanges. The fragmentation of stock markets with many new trading venues indicates that something else is going on. It could indicate that liquidity does not mean the same thing to all market participants, that two-sided liquidity is not the most important thing for all operators of trading venues, or that the fixed costs of trading venues do not matter as much as they used to and the provision of liquidity is a commodity. Lower fixed costs can increase the number of trading venues. In any case, there is reason to look at new ways to address liquidity in the future (sections 5.5.4 and 6.3.15).

If the trend of market fragmentation continues without an increase in the number of companies with publicly-traded shares, more trading venues will end up chasing the same limited pool of issuers. Where will this lead? The most extreme outcome of such a long-term trend would be a personal trading platform for each investor. On the issuer side, the most extreme outcome would be a trading venue for each issuer. Perhaps the two extreme outcomes can be combined in a way that is not as absurd as it seems. In fact, this is what we will propose in this book (Chapter 8).

The business models of firms that participate in the operation of trading platforms have changed. These firms currently provide various kinds of services. In the future, the firms that provide the plumbing of stock markets can be expected to focus on achieving positive network effects in novel ways.

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4 Trends in Securities Law

4.1 General Remarks

One of the results of Chapter 2 was that recognising the existence of firms with their own interests seems to be a key design principle in continental European company law and the key to internally coherent and sustainable company law. In Chapter 3, it turned out that the interests of non-financial firms have mattered very little in the evolution of stock exchange law. This may have reduced the number of companies with publicly-traded shares. In this Chapter, we will have a look at design principles behind securities law. Fostering the interests of non-financial issuers does not seem to have belonged to the primary objectives of the US Securities Acts and EU securities law in the past.[1] This can again help to understand why issuers have had incentives to opt out of public markets.

The doctrinal securities laws of different countries are not comparable as such. Many relevant legal norms can be classified as norms that belong either to securities law or to company law – or stock exchange law – depending on the legal system.

For the purposes of this book, we define securities law functionally as the area of law that addresses the issuing of securities to the public, the listing and delisting of such securities, public trading in securities, public offers, and securities-related services.

It is difficult to find universal design principles in the evolution of securities law other than the general protection of investors and functions.[2] It is easier to identify stated and normative objectives. Regulators have stated what the objectives of various regulatory acts are.

The objectives of this broad area of law are neither fixed nor universal. They depend on the jurisdiction, the context, the perceived function of securities law in the context, the prevailing political preferences, and the point in time.[3] One

1 See, for example, Veil R (2017) § 9 paragraph 5 on EU securities law: "The European legislative acts waste few words on issuers."

2 Merkt H (2001) pp 298–300 on "Individualschutz" and "Funktionschutz". The latter can be divided into the protection of institutional efficiency ("institutionelle Funktionsfähigkeit"), operational efficiency ("operationale Funktionsfähigkeit") and allocative efficiency ("allokative Funktionsfähigkeit").

3 For different views on the nature of securities regulation, see, for example, Romano R (1998); Mahoney PG (1997); Pritchard AC (1999); Gadinis S, Jackson HE (2007); Choi S (2000); Prentice R (2002).

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may note that "economic efficiency" is not the primary design principle for securities law.

The regulation of limited-liability companies and the regulation of securities markets have followed similar paths. Industrialisation made it necessary to facilitate the incorporation of limited-liability companies. The issuing of shares and the public's faith in capital markets were abused in many cases. This gave reason to amend company law or adopt securities laws to protect investors.

In Germany, abuses after the introduction of free incorporation were first addressed in the company law reform of 1884.[4] Abuses in the 1920s and 1930s again led to stricter protection of investors under the Aktiengesetz.[5]

In the US, public confidence in the markets was wiped out by the 1929 stock market crash.[6] To restore the public's confidence in capital markets, Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934. The Securities Exchange Act created the Securities and Exchange Commission (SEC).

The US had by then large stock markets that reflected the large size of its economy with integrated product markets from coast to coast. To cope with the economic power of the US after the Second World War, countries in western Europe chose economic integration that ultimately led to the creation of an internal market for goods and services. An internal market required the approximation of laws. For example, the First Company Law Directive was regarded as necessary to abolish restrictions on the freedom of establishment and to protect third parties in a larger marketplace.[7] In financial services, common rules were adopted to ensure a level playing field and the protection of investors.

The liberalisation of the financial sector increased concentration and systemic risk. After the financial crisis of 2007–2009, systemic risk was partly ad-

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4 Raiser T (1983) § 2.2: "Die Geschichte des modernen Aktienrechts leitete die Novelle zum ADHGB von 1870 ein … In einer weiteren Novelle von 1884 mußten die Vorschriften zugunsten der Aktionäre und des Publikums, namentlich zum Schutz gegen unseriöse Gründungen, wesentlich verschärft werden." *Ibid*., § 2.3: "Diese Verschärfungen machten die AG für kleinere Unternehmen ungeeignet."

5 Die aktienrechtlichen Vorschriften der Verordnung des Reichspräsidenten über Aktienrecht, Bankenaufsicht und über eine Steueramnestie. Vom 10. September 1931 (RGBl. I S. 493); Gesetz über Aktiengesellschaften und Kommanditgesellschaften auf Aktien (Aktiengesetz) vom 30. Januar 1937 (RGBl. I S. 107). See, for example, Schnorr T (2000) pp 58 and 80.

6 For financial crashes in general, see Rapp D (2015).

7 First Council Directive of 9 March 1968 on co-ordination of safeguards which, for the protection of the interests of members and others, are required by Member States of companies within the meaning of the second paragraph of Article 58 of the Treaty, with a view to making such safeguards equivalent throughout the Community (68/151/EEC).

dressed by increasing the regulation of banks, marketplaces, and the business of financial intermediaries.

In the following, we will discuss the stated and normative objectives of securities law in order to try to identify historical design principles. The stated and normative objectives have played an important role in the evolution of securities law (section 4.2). The objectives of securities law can be reached in different ways. There is choice between company law or securities law, disclosure-based or merit-review models of securities law, and private or public enforcement (section 4.3). Past regulation gives rise to path dependency, but change is inevitable. In the EU, new legislative acts are based on the Capital Markets Union action plan (section 4.4). There have been many reforms in the US in the past (section 4.5). We will conclude with a summary (section 4.6).

4.2 The Stated and Normative Objectives of Securities Law

4.2.1 General Remarks

According to Gilson, "[a]ll financial contracts respond to three central problems: uncertainty, information asymmetry, and opportunism in the form of agency costs".[8] One could also say that legal tools and practices generally address four issues in all commercial transactions, namely costs, risk, agency, and information.[9] Securities law must address all these general issues and characteristic context-specific issues.

Securities law tends to have stated and normative objectives. They depend on the jurisdiction, the context, the perceived function of securities law, the prevailing political preferences, and the point in time. What we call securities law is subject to constant change.

The variation of the normative objectives indicates that the fundamental objectives of securities law vary a great deal depending on political preferences. Securities law is the result of multiple political considerations.

This can be illustrated with four cases each with its own different normative objectives for securities law. The cases are: the evolution of German stock exchange and securities law in the twentieth century (section 4.2.2); the US Securities Acts of 1933 and 1934 (section 4.2.3); the Securities Acts Amendments of

8 Gilson RJ (2003) p 1076; Heminway JM (2017) pp 209–211.

9 Mäntysaari P (2010a) p 1; Mäntysaari P (2012) pp 45–46.

1975 and their implementation (section 4.2.4); and the evolution of the objectives of EU securities law (section 4.2.5).

4.2.2 The Development of Stock Exchange and Securities Law in Germany

German securities law started as stock exchange law. Its early objectives did not include investor protection. Investor protection was addressed in company law. Investor protection became more important because of European integration.

Many of the issues that are connected to the issuing of securities to the public, corporate governance, and public trading in shares can be regulated either in company law or in securities law. In the nineteenth century, German policymakers chose to focus on the regulation of limited-liability companies that were the issuers of securities.[10] The company law reform of 1870 (Aktienrechtsnovelle)[11] was based on the French model.[12] France was the leading country in the development of company law at the time. Abuses were addressed by the company law reform of 1884.

Before the end of the nineteenth century, Germany had hardly any exchange regulation that would have constituted "stock exchange law in a technical sense".[13] In other words, Germany had hardly any laws that specifically would have regulated the exchange as an institution and the business of the financial intermediaries using the exchange.

This changed with the adoption of the Exchange Act of 1896 (Börsengesetz).[14] The Exchange Act was a reaction to the crises of 1873, 1882, and 1890,

10 Fleckner AM, Hopt KJ (2013) p 540: "Policymakers of the nineteenth century increasingly tried to fight the abuses at the exchanges by regulating those who issued the items (share and bonds) that were most heavily traded: the stock corporations."

11 Gesetz betreffend die Kommanditgesellschaften auf Aktien und die Aktiengesellschaften of 11 June 1870. See Schnorr T (2000) p 17.

12 von Gierke O (1868) § 69.VII.A.4 p 999. See even Pistor K, Keinan Y, Kleinheisterkamp J, West MD (2002) pp 798–799 on a summary of the enactment of general corporate law statutes in many countries.

13 Fleckner AM, Hopt KJ (2013) p 538: "[M]any of the later Exchange Act's goals were pursued through other regulatory strategies ... A functional analysis of the stock exchange law's evolution would miss an important part of the picture if it ignored these regulatory approaches."

14 *Ibid.*, p 542: "With the foundation of the German Empire (Deutsches Reich) came the filfullment of the constitutional requirements, with the abandonment of liberal views the political requirements, and with the bad outcomes of the former regulatory approaches the legislative requirements to create an Exchange Act: the Börsengesetz (1896)."

but it may have been triggered by the fact that the agricultural lobby blamed futures trading for low grain prices.[15]

The perceived quality of the Exchange Act was poor at the time.[16] In any case, the primary objective of the Exchange Act was to strengthen the functioning of the exchange and the trading process. The Act focused on: the existential questions of an exchange and its organisation (§§ 1–28); brokers and dealers (§§ 29–35); the admission of securities to trading (§§ 36–42); the duty to publish a prospectus and prospectus liability (§§ 43–47); futures and forwards (§§ 48–69); commission transactions (§§ 70–74); and criminal sanctions (§§ 75–79). In contrast, investor protection was only regarded as a secondary objective in the Exchange Act of 1896.[17]

Before the First World War, both Germany and France had developed relatively large stock markets and capital markets that reflected their industrial might and the concentration of banking.[18] In fact, there were 28 listed companies per million inhabitants in Germany in 1913, a figure three times larger than that of the US.[19]

After the Second World War, Germany and France participated actively in European integration and became two of the core founding members of the EEC. The Exchange Act was amended several times to align German securities law with a growing body of European law. The fundamental goal of securities law was thus European integration. The objectives of German securities law were aligned with the objectives of European securities law.

The first fundamental revision of the Exchange Act was the adoption of the Exchange Listing Act of 1986 (Börsenzulassungsgesetz). The revision had three main objectives. The first was to implement into German law the requirements of the Listing Directive,[20] the Prospectus Directive,[21] and the Interim Report Directive.[22] The second was to introduce a new market segment (Geregelter Markt) to facilitate the access of small businesses to capital markets. The third

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15 Wiener FA (1905) § 5.

16 Fleckner AM, Hopt KJ (2013) p 543, citing the influential commentary Nußbaum A (1910).

17 Fleckner AM, Hopt KJ (2013) p 544.

18 Lenin VI (1917) Chapter III; Goetzmann WN (2004); Rajan RG, Zingales L (2003); La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (2008) p 316.

19 Burhop C, Chambers D, Cheffins BR (2015).

20 Council Directive 79/279/EEC of 5 March 1979 coordinating the conditions for the admission of securities to official stock exchange listing.

21 Council Directive 90/211/EEC of 23 April 1990 amending Directive 80/390/EEC in respect of the mutual recognition of public-offer prospectuses as stock-exchange listing particulars.

22 Council Directive 82/121/EEC of 15 February 1982 on information to be published on a regular basis by companies the shares of which have been admitted to official stock-exchange listing.

was to bring into force an Exchange Admission Regulation (Börsenzulassungs-Verordnung) specifying the requirements of the Exchange Act for the admission of securities to exchange trading.[23]

The Exchange Act was thus amended to reflect the objectives of EC securities law. The primary objective of EC securities law, in the light of the relevant treaties,[24] was to create a single market for financial services. Some years later, the European Commission described these past actions in its Financial Services Action Plan as follows: "A single market for financial services has been under construction since 1973. Important strides have been made towards providing a secure prudential environment in which financial institutions can trade in other Member States."[25]

The goals of these German regulatory reforms did not include the reception of US securities law. It has been argued that Germany was "very reluctant to follow the trend of American securities regulation" because of its own bank-based system characterised by insider networks of industrial and trading companies, banks, and insurance companies (Rhenanian capitalism).[26] But European integration had its own dynamics. Germany rode the wave of European integration even in securities law and the regulation of banking and insurance.

In the 1990s, market pressure and the increasing volume and scope of EU company and capital market law forced Germany to adopt a larger securities law regime "modelled on the laws of Britain, France, and some other member states".[27] A federal capital market supervisory agency (BAWe)[28] was formed in 1995. It was merged with two other federal agencies to create the Federal Financial Supervisory Authority (BaFin)[29] in 2002.

Conclusion. In Germany, abuses were originally addressed in company law. The Exchange Act of 1896 (Börsengesetz) was adopted to facilitate the business of the exchange and the business of the financial intermediaries using the exchange. Later German securities law reflects the objectives of EC/EU securities law.

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23 Fleckner AM, Hopt KJ (2013) p 546.

24 Article 2 of the Treaty establishing the European Economic Community (1957); Article 2 of the Treaty establishing the European Community (Nice consolidated version, 2002); Article 2 of the Treaty on European Union (the Maastricht Treaty, 1992); Article 3(3) of the Treaty on European Union (2002).

25 Communication of the Commission – Implementing the framework for financial markets: action plan, COM(1999) 232 final.

26 Hopt KJ (2019a) III.1(b).

27 *Ibid.*

28 Das Bundesaufsichtsamt für den Wertpapierhandel.

29 Bundesanstalt für Finanzdienstleistungsaufsicht.

For most of the twentieth century, the development of German securities law was driven by the interests of issuers, the interests of financial intermediaries, and, towards the end of the twentieth century, the political goal of market integration. The fundamental questions of corporate governance and the powers of shareholders were already addressed in the company law reform of 1884 (section 2.4.5) and in later company law reforms. The Aktiengesetz of 1937 and the Aktiengesetz of 1965 were steps of evolution on the same path.

4.2.3 The US Securities Acts of 1933 and 1934

Unlike German securities law, the first objective of the US Securities Acts was to protect investors through publicity. However, it was not the only objective.

The Securities Act of 1933 and the Securities Exchange Act of 1934 did not address quite the same problems as the German Börsengesetz of 1896 for two main reasons. First, the Securities Acts complemented a more dispositive company law system. Incorporators fixed the corporate governance model as they saw fit. The Securities Acts were thus embedded in a different discourse: "The Securities Act of 1933 did not spring full grown from the brow of New Deal Zeus. It followed a generation of state regulation and several centuries of legislation in England."[30] Second, the Wall Street Crash of 1929 was fresh in mind. The Securities Acts were adopted to protect investors and make the business of dishonest issuers more difficult. Investor protection was necessary due to the important role of securities markets in the US.[31]

According to its original wording, the Securities Exchange Act of 1934 allowed the SEC to regulate financial markets as "necessary or appropriate in the public interest or for the protection of investors." In 1996, Congress added Section 2(b) to the Securities Act of 1933, and Section 23(a)(2) to the Securities Exchange Act of 1934. The current wording is as follows: "Whenever pursuant

30 Loss L, Seligman J, Paredes T (2011) Volume I, Chapter I pp 1–11.

31 See, for example, Hazen TL (2009) p 1: "Securities occupy a unique and important place in American life. They are the intruments which evidence the financial rights, and in some cases the power to control, the corporations which own the great bulk of the nation's productive facilities. They are the instruments through which business enterprises and governmental entities raise a substantial part of the funds with which to finance new capital construction. They are the instruments in which many millions of Americans invest their savings to provide for their retirement income, or education for their children, or in hopes of achieving a higher standard of living. And, inevitably, they are the instruments by which unscrupulous promoters and salesmen prey on those hopes and desires and sell worthless paper to many thousands of people every year."

to this title the Commission is engaged in rulemaking and is required to consider or determine whether an action is necessary or appropriate in the public interest, the Commission shall also consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation." We can have a brief look at the stated objectives of the Securities Acts.

The Securities Act of 1933. To rebuild faith in the legitimacy of the system, the drafters of the 1933 Act forced issuers to disclose relevant information.[32]

The broad purposes of the Securities Act of 1933 were described in the Second Annual Report of the Securities and Exchange Commission (SEC): "The purposes of the Securities Act of 1933 as outlined in the Report of the Committee on Banking and Currency are to prevent exploitation of the public by the sale of unsound, fraudulent, and worthless securities through misrepresentation; to place adequate and true information before the investor; to protect honest enterprise, seeking capital by honest presentation, against the competition afforded by dishonest securities offered to the public through crooked promotion; to bring into productive channels of industry and development capital which has grown timid to the point of hoarding; and to aid in providing employment and restoring buying and consuming power."[33]

In practice, however, the 1933 Act was mainly expected to (1) reduce excesses and fraud and (2) improve the valuation of securities. Without a slow education process, investors could not be expected to understand disclosures.[34]

The prohibition of fraudulent interstate transactions under Section 17 of the Securities Act of 1933 was an important supplement to state blue-sky laws,[35] but generally the 1933 Act had a limited scope. In 1937, John Hanna described its limited scope as follows: "The Securities Act itself contains no provisions requiring issuers of securities registered under it to supply investors with current information about these securities. It is not concerned in any way with dealings in securities already issued nor, except to a limited extent, with dealings in securities issued in accordance with its provisions. It is obvious that many factors besides the information available at the time of registration may have a bearing upon

32 Auerbach J, Hayes SL (1986) pp 35–36 and 42.

33 SEC (1936) p 1. See also Hanna J (1937) p 256: "The broad purpose of the Securities Act of 1933 is to protect the buyer of a newly issued security by requiring a fair disclosure of material fact and by penalizing the failure to furnish them in connection with the sale of the security through the use of the mails or of the instrumentalities of interstate commerce. In addition, Section 17 of the Securities Act makes unlawful the use of the mails or the instrumentalities of interstate commerce to defraud buyers of securities whether newly issued or not."

34 Douglas WO, Bates GE (1933) pp 171–172.

35 Hanna J (1937) p 256. For blue-sky laws, see Macey JR, Miller GP (1991); Mahoney PG (2003).

the attractiveness of a security to a purchaser. The information provided in the registration statement becomes obsolete in a comparatively brief period. Moreover, whatever the intrinsic merits of a security its desirability for the purpose of investment and speculation is affected by an actual and apparent demand for it."[36]

The Securities Exchange Act of 1934. The Securities Act of 1933 was supplemented by the Securities Exchange Act of 1934 because of its limited scope. According to Hanna, "[t]he Securities Exchange Act of 1934 supplements the Security Act in two principal ways: (1) It makes available reliable information about the current business conditions of the issuers of what are on the whole the most important securities bought and sold in the United States; (2) It prohibits practices tending to create fictitious values for securities and gives the Securities and Exchange Commission broad powers over the trading in securities."[37]

Section 2 of the Securities Exchange Act of 1934 lists several reasons why new regulation was necessary. The starting point in the introductory provisions is "a national public interest … to protect interstate commerce, the national credit, the Federal taxing power, to protect and make more effective the national banking system and Federal Reserve System, and to insure the maintenance of fair and honest markets in such transactions".[38] Paragraphs (1) – (4) of Section 2 state the connection between the national public interest and the substantive provisions of Title I of the Securities Exchange Act.[39]

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36 Hanna J (1937) pp 256 – 257.

37 *Ibid.*, p 257.

38 The wording "to remove impediments to and perfect the mechanisms of a national market system for securities and a national system for the clearance and settlement of securities transactions and the safeguarding of securities and funds related thereto," after "require appropriate reports," was inserted to Section 2 of the Securities Exchange Act of 1934 by the Securities Acts Amendments of 1975.

39 See, in particular, Section 2 of the Securities Exchange Act of 1934: "… (2) The prices established and offered in such transactions are generally disseminated and quoted throughout the United States and foreign countries and constitute a basis for determining and establishing the prices at which securities are bought and sold … (3) Frequently the prices of securities on such exchanges and markets are susceptible to manipulation and control, and the dissemination of such prices gives rise to excessive speculation, resulting in sudden and unreasonable fluctuations in the prices of securities … (4) National emergencies, which produce widespread unemployment and the dislocation of trade, transportation, and industry, and which burden interstate commerce and adversely affect the general welfare, are precipitated, intensified, and prolonged by manipulation and sudden and unreasonable fluctuations of security prices and by excessive speculation on such exchanges and markets …"

The SEC described the purpose of the 1934 Act as follows:[40] “The objectives sought in the passage of the Securities Exchange Act of 1934 were threefold, viz, to prevent the excessive use of credit to finance speculation in securities; to see to it that the market places in which securities are purchased and sold, such as the stock exchanges and the so-called over-the-counter markets, are purged of the abuses which had crept into them; and to make available to the average investor honest and reliable information sufficiently complete to acquaint him with the current business conditions of the company, the securities of which he may desire to buy or sell.”

The publicity features of the Securities Acts were made clear in the House Report on the Exchange Act. It is useful to cite it at length in the light of the fact that mandatory disclosures became characteristic of US securities law: “No investor, no speculator, can safely buy and sell securities upon the exchanges without having an intelligence basis for forming his judgment as to the value of the securities he buys and sells. The idea of a free and open market is built upon the theory that competing judgments of buyers and sellers as to the fair price of a security brings about a situation where the market price reflects as nearly as possible a just price. Just as artificial manipulation tends to upset the true function of an open market, so the hiding and secreting important information obstructs the operation of the markets as indices of real value. There cannot be honest markets without honest publicity. Manipulation and dishonest practices of the market place thrive upon mystery and secrecy. The disclosure of information materially important to investors may not instantaneously be reflected in market value, but despite the intricacies of security values, truth does find relatively quick acceptance on the market … The possession of these facts has for a number of years been the exclusive perquisite of powerful banking and industrial groups. Making these facts generally available will be of material benefit and guidance to business as a whole.”[41]

The prudent man standard. The Securities Act of 1933 requires full disclosure of the nature of securities sold in interstate commerce. Sections 11(a) and (b) of the 1933 Act provide for civil liability for issuers that make material misstatements or omissions in a securities offering registration statement. Potential Section 11 defendants include the issuer, directors, underwriters, and accountants. However, defendants are protected by the availability of defences. A non-issuer

40 SEC (1936) pp 1–2.

41 Quoted from Hanna J (1937) pp 257–258, footnote 5: “The importance ascribed to the features of the Act in carrying the publicity features of the Securities Act is shown in the following extract from H. R. Rep. No. 1363, 73d Cong., 2d Less., quoted from C. C. H., Stock Exchange Regulation Service, par. 2105.02, pp. 1016–1018 …”

may use the “due diligence defense” (*BarChris*).[42] Section 11 nevertheless requires “a reasonable investigation”. The reasonable investigation standard of the 1933 Act was a standard that was characteristic of a fiduciary relationship. The 1934 amendment to Section 11(c) of the 1933 Act laid down “a prudent man” rule. The standard was thus “that required of a prudent man in the management of his own property”.[43]

Conclusion. The 1933 and 1934 Acts were designed to protect investors and make the business of dishonest issuers more difficult by requiring disclosures and laying down civil liability for issuers and non-issuers. The objectives of the Securities Acts were not limited to the protection of investors. The Securities Acts had other objectives as well.

4.2.4 The US Securities Acts Amendments of 1975

The Securities Acts needed to be amended because of market changes.[44] The Securities Acts Amendments of 1964[45] were preceded by the Special Study of Securities Markets, a report submitted to Congress by the Special Study Group in 1963. The 1963 report provided the most comprehensive examination and analysis of conditions in US securities markets since the Congressional inquiries of the

42 Escott v. BarChris Constr. Corp., 283 F. Supp. 643, 697 (S.D.N.Y. 1968). Leahy JK (2012) p 411: “Nearly forty-five years after it was decided, Escott v. BarChris Construction Corp. remains the definitive decision on the due diligence defense under Section 11 of the Securities Act of 1933 … BarChris held that, in order to escape Section 11 liability, an underwriter must independently verify material facts in the offering document filed with the Securities and Exchange Commission … BarChris also opined that an underwriter must take an adversarial role to the issuer in due diligence.”

43 Auerbach J, Hayes SL (1986) p 52: “As enacted, the 1934 amendment to section 11(c) of the 1933 Act provided that the standard for determining what constitutes reasonable investigation and reasonable ground for belief ‘shall be that required of a prudent man in the management of his own property,’ rather than a standard defined as ‘that required of a person occupying a fiduciary relationship.’” Auerbach J, Hayes SL (1986) p 53: “… it appears reasonable to infer that the Securities Act provision of a prudent man test was similarly relying on Harvard College, first by requiring in 1933 that the standard of reasonableness be that which characterizes a fiduciary relationship, and then in the 1934 amendment by invoking the prudent man rule to define the fiduciary standard.”

44 See Special Study of Securities Markets (1963a) pp III – IV.

45 The purpose of the Securities Acts Amendments of 1964 is summed up in the title of he Act: “An Act … to extend disclosure requirements to the issuers of additional publicly traded securities, to provide for improved qualification and disciplinary procedures for registered brokers and dealers, and for other purposes”.

1930s.[46] The purpose of the changes proposed in the report were "to strengthen the mechanisms facilitating the free flow of capital into the markets and to raise the standards of investor protection, thus preserving and enhancing the level of investor confidence".[47] According to the report, "[r]aising capital from the general public is a marked feature of the American economic system ... The importance of the capital markets to [the American] national economic progress does not permit anything less than the most fair and efficient operations."[48]

This theme was continued in the Securities Acts Amendments of 1975. The 1975 Amendments created more specific objectives for securities regulation. Congress distinguished between overall goals and specific objectives.

In the Securities Acts Amendments of 1975, the starting point was to ask what is "in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets". These overall goals were to be assured by adding to Section 11A of the Exchange Act of 1934 the following five objectives:[49]

1. economically efficient execution of securities transactions;
2. fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;
3. the availability to brokers, dealers, and investors of information with respect to quotations and transactions in securities;
4. the practicability of brokers executing investors' orders in the best market; and
5. an opportunity, consistent with efficiency and best execution, for investors' orders to be executed without the participation of a dealer.[50]

Moreover, Congress believed that these five objectives would be fostered by linking all markets for qualified securities through communication and data processing facilities. According to Congress, such linkages would: foster efficiency; enhance competition; increase the information available to brokers, dealers, and investors; facilitate the offsetting (matching) of investors' orders; and contribute to the best execution of investors' orders.[51]

46 Special Study of Securities Markets (1963a) p IV.
47 *Ibid.*
48 *Ibid.*
49 15 U.S.C. 78k–1.
50 Section 7 of the Securities Acts Amendments of 1975; Section 11A(a)(1)(C) of the Securities Exchange Act of 1934.
51 Section 7 of the Securities Acts Amendments of 1975; Section 11A(a)(1)(D) of the Securities Exchange Act of 1934: "The linking of all markets for qualified securities through communication

The SEC was directed, "having due regard for the public interest, the protection of investors, and the maintenance of fair and orderly markets, to use its authority … to facilitate the establishment of a national market system for securities" to carry out the objectives.[52]

The SEC has noted that "the five objectives set forth in Section 11A can, at times, be difficult to reconcile". The objective of matching investor orders can be difficult to reconcile with the objective of promoting competition among markets. Competition among trading centers to provide specialised services for investors can lead to practices that may detract from public price transparency. Mandating the consolidation of order flow in a single venue would create a monopoly and thereby exclude the benefits of competition among markets.[53]

The SEC therefore has tried to "facilitate an appropriately balanced market structure that promotes competition among markets, while minimizing the potentially adverse effects of fragmentation on efficiency, price transparency, best execution of investor orders, and order interaction". According to the SEC, "[a]n appropriately balanced market structure also must provide for strong investor protection and enable businesses to raise the capital they need to grow and to benefit the overall economy".[54]

In effect, one of the unstated goals of US securities law was market integration. A high level of market integration was reached after the creation of a national stock market under Regulation NMS.[55] Thereafter, the unstated goal of market integration was not as relevant any more. The new trend was market fragmentation (Chapter 3).

Conclusion. In the Securities Acts Amendments of 1975, Congress distinguished between overall goals and specific objectives. The overall goal was what is "in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets". There were five specific objectives that may be "difficult to reconcile". For example, they included "economically efficient execution of securities transactions" and "fair competition among brokers and

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and data processing facilities will foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the offsetting of investors' orders, and contribute to best execution of such orders."

52 Section 7 of the Securities Acts Amendments of 1975; Section 11A(a)(2) of the Securities Exchange Act of 1934.

53 Securities and Exchange Commission, Concept Release on Equity Market Structure, Exchange Act Release No. 34–61358, Federal Register, Vol. 75, No. 13, pp 3594–3614 (January 21, 2010) at p 3597.

54 *Ibid.*, at p 3597.

55 SEC Release No. 34–51808 (June 9, 2005).

dealers, among exchange markets, and between exchange markets and markets other than exchange markets".

4.2.5 Securities Law in the EU

The objectives of EU securities law are sometimes misunderstood. For example, it would be misleading to say that the aims of EU securities law include efficiency, investor protection, and financial stability,[56] and that the regulatory approaches of the EU in this area include transparency, prohibitions, and the introduction of a system of enforcement.[57]

This is because EU securities law shares its fundamental aims with EU law in general. The development of the objectives of the regulation of securities markets can be followed by studying the three directives that have formed the basis of European securities markets in the past (ISD, MiFID, MiFID II),[58] and the Capital Markets Union action plan that indicates the direction of new regulation (section 4.4). It is first necessary to have a look at the EU treaties in order to find out about the general aims of EU law.

Treaties. The aims of EU law have been laid down by the EU treaties. EU law has multiple aims. One of the most important general goals of the Treaty on European Union is establishing an internal market. Establishing a common market has belonged to the aims of the Community since the EEC Treaty of 1957 (the Rome Treaty).[59] It was defined as one of the tasks of the EU under the Maastricht

56 Veil R (2017) § 2 paragraphs 3 – 12.

57 *Ibid.*, § 2 paragraphs 15 – 17. See, for example, Walla F (2017) § 4 paragraphs 39 – 43 on a level playing field and minimum or maximum harmonisation.

58 Council Directive 93/22/EEC of 10 May 1993 on investment services in the securities field (ISD). Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC (MiFID). Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (MiFID II).

59 Traité instituant la Communauté Economique Européenne, Vertrag zur Gründung der Europäischen Wirtschaftsgemeinschaft, Treaty establishing the European Economic Community. See Article 2 of the Rome Treaty (1957): "It shall be the aim of the Community, by establishing a Common Market and progressively approximating the economic policies of Member States, to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an increased stability, an accelerated raising of the standard of living and closer relations between its Member States."

Treaty of 1992.[60] According to the current 2012 version of the Treaty on European Union, "[t]he Union shall establish an internal market".

Establishing an internal market is an important task, but not the only task of the EU.[61] The aims of the earlier EEC Treaty of 1957 included an "ever closer union", the elimination of trade and other barriers between the Member States, and the approximation of laws, among other things.[62] The Treaty on European Union has even other and broader general aims.[63] The EU shall now "work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment", as well as "promote scientific and technological advance", among other things.[64]

EU securities law shares these fundamental aims. The aims of EU securities law, therefore, are not limited to things that are regarded as the overall goals and objectives of the US Securities Acts (section 4.2.4). Neither are they limited to "economic efficiency" or "market efficiency", whatever such forms of efficiency might mean in this context.[65] Securities law is the result of multiple political considerations.

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60 Article 2 of the Treaty establishing the European Community (Nice consolidated version, 2002): "The Community shall have as its task, by establishing a common market and an economic and monetary union and by implementing common policies or activities referred to in Articles 3 and 4, to promote throughout the Community a harmonious, balanced and sustainable development of economic activities, a high level of employment and of social protection, equality between men and women, sustainable and non-inflationary growth, a high degree of competitiveness and convergence of economic performance, a high level of protection and improvement of the quality of the environment, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States." Article 2 of the Treaty on European Union (the Maastricht Treaty, 1992): "The Community shall have as its task, by establishing a common market and an economic and monetary union and by implementing the common policies or activities referred to in Articles 3 and 3a, to promote throughout the Community a harmonious and balanced development of economic activities, sustainable and non-inflationary growth respecting the environment, a high degree of convergence of economic performance, a high level of employment and of social protection, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States."

61 Article 3(3) of the Treaty on European Union (2012).

62 Articles 2–3 of the Rome Treaty.

63 Article 3 of the Treaty on European Union.

64 Article 3(3) of the Treaty on European Union.

65 For a critical study on economic efficiency as a legal principle generally, see Eidenmüller H (2005).

The primary objective of EC/EU securities law must be seen in the light of the relevant Treaties. Its primary objective has for a long time been market integration, that is, the creation of "a common market", "a single market", or "an internal market" for financial services.[66] The internal market for financial services has been developed on a step by step basis and is a work in progress.

The Commission first focused on the freedom to provide services and the freedom of establishment guaranteed by the Treaties. In other words, financial institutions were given a better chance to do business in other Member States.[67]

There is nowadays a particular method of securities regulation in the EU. It is based on the Lamfalussy process and the Single Rulebook concept. While the Lamfalussy process is applied generally, the Single Rulebook concept is applied in the EU financial services sector.

The ISD. To find out about the stated and normative objectives of EU securities law, we can have look at the ISD, MiFID that replaced the ISD, and MiFID II that replaced MiFID.

The ISD was designed as "an instrument essential to the achievement of the internal market". To facilitate market integration, it was deemed necessary to regulate the business of investment firms.[68]

The ISD addressed the question of market entry in investment services by setting out how the right of establishment and the freedom to provide services were to be achieved.[69] It was deemed necessary to use three mechanisms to facilitate market entry without sacrificing the goals of Member States' national securities markets laws, in particular the protection of investors and the protection

66 FESE (2015) p 3: "In the initial 10 – 15 years of building the Single Market, the EU concentrated on policies that would foster the integration of its national financial sectors in order to create one united European market that would be efficient, deep, and competitive (e.g. in the image of the US market). The intention to integrate equities markets resulted in a major focus on reducing the transaction costs of trading of the largest stocks ('blue chips') which, it was assumed, would lower the cost of accessing capital markets (but there was no systematic measurement of the net effects on end-users in the real economy). Cross-border competition was the main tool to increase efficiency as experienced by the financial services industry. There was also limited discussion on what impact trading would have on the conditions for listing faced by companies, especially smaller ones."

67 Communication of the Commission – Implementing the framework for financial markets: action plan, COM(1999) 232 final: "A single market for financial services has been under construction since 1973. Important strides have been made towards providing a secure prudential environment in which financial institutions can trade in other Member States."

68 Article 1 of Directive 93/22/EEC (ISD): "For the purposes of this Directive: … 2. investment firm shall mean any legal person the regular occupation or business of which is the provision of investment services for third parties on a professional basis …"

69 Recital 1 of Directive 93/22/EEC (ISD).

of the stability of the financial system. The first was an authorisation requirement under the principle of home country control. A firm could not provide investment services covered by the ISD without authorisation by its home Member State.[70] The second was mutual recognition. There was mutual recognition of authorisations and of prudential supervision systems. The third was the harmonisation of standards.[71]

The objectives of the ISD were later summarised as follows: "[The ISD] sought to establish the conditions under which authorised investment firms and banks could provide specified services or establish branches in other Member States on the basis of home country authorisation and supervision. To this end, that Directive aimed to harmonise the initial authorisation and operating requirements for investment firms including conduct of business rules. It also provided for the harmonisation of some conditions governing the operation of regulated markets."[72]

The key objective of the ISD was market integration. The protection of investors and the protection of the stability of the financial system were taken into account to the extent that it was necessary to do so in order to ensure the legitimacy of the principle of home country control. Restrictions on the freedom to provide services and the freedom of establishment were permitted on grounds of public interest only on certain conditions.[73]

MiFID. The focus of the EU changed after the initial integration of European securities markets and the introduction of the euro. The already more advanced US capital markets had meanwhile been transformed by financialisation and the financial business model.

In 1998, the European Council held in Cardiff requested the European Commission "to table a framework for action ... to improve the single market in financial services, in particular examining the effectiveness of implementation of current legislation and identifying weaknesses which may require amending legislation".[74]

70 Recital 2 of Directive 93/22/EEC (ISD).

71 Recital 3 of Directive 93/22/EEC (ISD).

72 Recital 1 of Directive 2004/39/EC (MiFID).

73 See paragraph 8 of Case 120/78 Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein (Cassis de Dijon), ECLI:EU:C:1979:42; paragraphs 12–13 and 15 of Case 240/83, Procureur de la République v Association de défense des brûleurs d'huiles usagées (ADBHU), ECLI:EU:C:1985:5. For Treaty provisions, see Article 36 of the TFEU (ex Article 30 of the EC Treaty); Article 45 of the TFEU (ex Article 39 of the EC Treaty); Article 52 of the TFEU (ex Article 46 of the EC Treaty); Article 65 of the TFEU (ex Article 58 of the EC Treaty). One can find a further example of the test in Article 3 of Directive 2000/31/EC (Directive on electronic commerce).

74 European Council, Cardiff, 15 and 16 June 1998, Presidency Conclusions, paragraph 17.

In a 1998 communication, the Commission said that the EU financial services sector was "lagging behind". The Commission argued for the expansion of financial intermediation in the EU: "Financial services represent about 6% of EU GDP and 2.45% of employment ... [T]hey are one of the sectors where Europe has the greatest potential for employment expansion. The integration of financial markets will offer new business opportunities in the financial services sector ..."[75] According to the Commission, there was money to be made in cross-border consumer business: "As for retail financial markets, despite the progress that has been made in the completion of a single financial market, cross-border sales of traditional financial products to individual consumers remain the exception."[76] At the same time, the Commission took it for granted that the expansion of financial intermediation would bring benefits outside the financial service sector: "Efficient and transparent financial markets also help to optimise the allocation of capital. By facilitating the access to equity financing and risk capital, they allow SMEs and start-up companies to fully exploit their growth and job creation potential."[77] Moreover, the Commission argued that that cross-border sales of financial products would allow consumers to "get more value for money. They will be offered a wider choice of financial services and products such as mortgages, pensions, and insurance, at more convenient prices."[78]

In 1999, the Commission published its Financial Services Action Plan (the FSAP) for the approximation of the regulation of financial services in the EU.[79] The Commission worked on the implementation of the FSAB until 2004.

On one hand, the Commission seems to have had the interests of financial intermediaries in mind. It was in the interests of large financial intermediaries to regulate retail business at EU level. A common regulatory regime made it easier for them to do cross-border business.[80] On the other, the Commission motivat-

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75 Financial Services: building a framework for action, Communication of the Commission, COM(1998) 625, 28 October 1998, Executive summary.

76 *Ibid.*

77 *Ibid.*

78 *Ibid.*

79 Communication of the Commission – Implementing the framework for financial markets: action plan, COM(1999) 232 final. See Moloney N (2004).

80 Moloney N (2004) p 1004: "As the FSAP concludes, it is now clear that considerable success has been achieved, on paper at least, on the wholesale or professional investor side, particularly with respect to issuing securities and securities trading. Nonetheless, the new focus on the retail markets and, in particular, on investor protection, is striking and reflects the regulatory bias of the new regime as well as its attendant costs and risks to market innovation."

ed the FSAP with the needs of corporate and household customers.[81] These two sides were reflected in the argumentation of the Commission.

First, the Commission argued that there was not enough integration: "[T]he Union's financial markets remain segmented and business and consumers continue to be deprived of direct access to cross-border financial institutions".[82]

Second, the provision of financial services across national boundaries was deemed to benefit customers and bring down the costs of financial intermediation: "With the introduction of the euro, there is a unique window of opportunity to equip the EU with a modern financial apparatus in which the cost of capital and financial intermediation are kept to a minimum. Corporate and household users of financial services will benefit significantly, and investment and employment across the Union will be stimulated."[83]

The Commission highlighted five imperatives for action: "the EU should be endowed with a legislative apparatus capable of responding to new regulatory challenges; any remaining capital market fragmentation should be eliminated, thereby reducing the cost of capital raised on EU markets; users and suppliers of financial services should be able to exploit freely the commercial opportunities offered by a single financial market, while benefiting from a high level of consumer protection; closer co-ordination of supervisory authorities should be encouraged; and an integrated EU infrastructure should be developed to underpin retail and wholesale financial transactions."[84]

Investor protection was regarded as instrumental to cross-border sales of financial products: "In particular, insufficient tax harmonisation, administrative requirements and limited lack of transparency constitute important barriers to the completion of the Single Market and help to explain a certain lack of consumer confidence in cross-border transactions. There is therefore a need to find pragmatic ways of reconciling the aim of enhancing consumer confidence by promoting full financial market integration while ensuring high levels of consumer protection."[85]

81 Financial Services: Implementing the framework for financial markets: Action Plan. Communication of the Commission, COM(1999) 232, 11 May 1999.

82 *Ibid.*, I.

83 *Ibid.*, I.

84 *Ibid.*, I, referring to Communication of the Commission, Financial Services: Building a framework for action, COM(1998) 625, 28 October 1998.

85 Communication of the Commission, Financial Services: Building a framework for action, COM(1998) 625, 28 October 1998, Executive summary.

The Markets in Financial Instruments Directive (MiFID) can be understood against this background. MiFID was the cornerstone of the FSAP and completed the FSAP.

MiFID built on the ISD and expanded the scope of the regulatory regime as "more investors have become active in the financial markets and are offered an even more complex wide-ranging set of services and instrument".[86] MiFID applied to a broader range of activities.[87] It expanded the scope of the regulation of marketplaces by complementing the category of regulated markets with the category of MTF.[88] It refined the principle of home country authorisation and supervision.[89] Investors were protected depending on their category (retail, professional or counterparty).[90]

Moreover, MiFID addressed in Europe the issues mentioned in Section 11A of the Securities Exchange Act of 1934 as the American objectives of securities law.[91]

First, MiFID provided for a "best execution" obligation to ensure that investment firms execute client orders on terms that are most favourable to the client.[92] According to the main rule, "Member States shall require that investment firms take all reasonable steps to obtain, when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order."[93] MiFID also required investment firms to implement the necessary procedures and arrangements.[94]

Second, MiFID addressed fair competition in securities markets by allowing investment firms to provide services in the Single Market on the basis of home country supervision[95] and by requiring the publication of trading information.[96]

The disclosure of information with respect to quotations and transactions in securities markets served many purposes. It was designed to contribute to fair

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86 Recital 2 of Directive 2004/39/EC (MiFID).
87 Recitals 2–5 of Directive 2004/39/EC (MiFID).
88 Recitals 5–6 of Directive 2004/39/EC (MiFID).
89 Recitals 22–23 and 32 of Directive 2004/39/EC (MiFID).
90 Recital 31 of Directive 2004/39/EC (MiFID).
91 For differences and similarities, see Boskovic T, Cerruti C, Noel M (2010) p vii: "[R]ules in the current securities regulations may differ on both sides of the Atlantic, but objectives and some of the outcomes are comparable."
92 Recital 33 of Directive 2004/39/EC (MiFID).
93 Article 21(1) of Directive 2004/39/EC (MiFID).
94 Article 22(1) of Directive 2004/39/EC (MiFID).
95 Recital 2 of Directive 2004/39/EC (MiFID).
96 Recitals 34 and 44 of Directive 2004/39/EC (MiFID).

competition,[97] investor protection, the smooth operation of securities markets, the effective integration of Member State equity markets, the efficiency of the overall price formation process for equity instruments, and the effective operation of "best execution" obligations.[98]

Unlike the Securities Acts Amendments of 1975, MiFID did not address the linking of trading venues. This reflects the fact that the FSAP's main focus was on the cross-border sale of financial products by financial intermediaries to consumers and corporate customers. The regulatory regime probably contributed to the remaining fragmentation and small size of European equity capital markets but may have increased financial stability.[99]

MiFID II. MiFID II was part of a major legislative reaction to the failure of the regulatory framework to prevent the financial crisis of 2007–2009. MiFID II was closely connected to other new legislative acts adopted as a reaction to the financial crisis.

The reaction of the EU was largely based on recommendations made by the de Larosière Group in its 2009 report.[100] For example, the de Larosière Group recommended increasing the minimum capital requirements for banks,[101] extending regulation to the "parallel banking system", improving transparency in all financial markets,[102] and standardising over-the-counter derivatives.[103] More-

97 Recital 34 of Directive 2004/39/EC (MiFID): "Fair competition requires that market participants and investors be able to compare the prices that trading venues (i.e. regulated markets, MTFs and intermediaries) are required to publish. To this end, it is recommended that Member States remove any obstacles which may prevent the consolidation at European level of the relevant information and its publication."

98 Recital 44 of Directive 2004/39/EC (MiFID).

99 See OECD (2015c) p 132.

100 Report by the High level group on financial supervision in the EU, chaired by Jacques de Larosière. Brussels, 25 February 2009.

101 Recommendation 1 of the de Larosière Group: "The Group sees the need for a fundamental review of the Basel 2 rules. The Basel Committee of Banking Supervisors should therefore be invited to urgently amend the rules with a view to:
- gradually increase minimum capital requirements;
- reduce pro-cyclicality, by e.g. encouraging dynamic provisioning or capital buffers;
- introduce stricter rules for off-balance sheet items;
- tighten norms on liquidity management; and
- strengthen the rules for bank's internal control and risk management, notably by reinforcing the 'fit and proper' criteria for management and board members.Furthermore, it is essential that rules are complemented by more reliance on judgement."

102 Recommendation 7 of the de Larosière Group: "Concerning the 'parallel banking system' the Group recommends to:

over, the de Larosière Group recommended a switch from directives to regulations.[104] Of these two kinds of legislative acts, a regulation is binding in its entirety and directly applicable in all Member States.[105]

MiFID II was connected to what is known as the CRD IV package consisting of a new directive (CRD)[106] and a new regulation (CRR).[107] In the past, MiFID had provided for the coordination of rules that governed the authorisation and pursuit of the business of investment firms but had neither established the amounts of the initial capital of such firms nor provided a common framework for monitoring the risks incurred by them.[108] The freedom of establishment and the freedom to provide financial services in the field of credit institutions and other investment firms would, therefore, not have been possible without the Capital Requirements Directive. However, it was deemed necessary to replace the Capital Requirements Directive for several reasons. First, "excessive and imprudent risk-taking in the banking sector" had led to "the failure of individual institutions and systemic problems in Member States and globally" during the financial crisis. Second, the failures had been made possible by "weaknesses in corporate governance in a number of institutions".[109] Third, it was necessary to implement the Basel III framework for banks.

The Capital Requirements Directive was replaced by the CRD IV package in 2013. While CRD coordinates national provisions concerning access to the activ-

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– extend appropriate regulation, in a proportionate manner, to all firms or entities conducting financial activities of a potentially systemic nature, even if they have no direct dealings with the public at large;
– improve transparency in all financial markets – and notably for systemically important hedge funds – by imposing, in all EU Member States and internationally, registration and information requirements on hedge fund managers, concerning their strategies, methods and leverage, including their worldwide activities;
– introduce appropriate capital requirements on banks owning or operating a hedge fund or being otherwise engaged in significant proprietary trading and to closely monitor them."

103 Recommendation 8 of the de Larosière Group.

104 Recommendation 10 of the de Larosière Group.

105 See Article 288 of the Treaty on the Functioning of the European Union (TFEU)

106 Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

107 Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

108 Recital 4 of Directive 2013/36/EU (Capital Requirements Directive).

109 Recital 54 of Directive 2013/36/EU (Capital Requirements Directive).

ity of credit institutions and investment firms, the modalities for their governance, and their supervisory framework, CRR establishes uniform and directly applicable prudential requirements for credit institutions and investment firms. Together, CRD and CRR form the legal framework governing banking activities, the supervisory framework, and the prudential rules for credit institutions and investment firms.[110]

Moreover, EMIR[111] laid down clearing and bilateral risk-management requirements for standardised over-the-counter (OTC) derivative contracts[112] and made it mandatory to use central counterparties (CCPs).[113] EMIR implemented G20 leaders' 2009 Pittsburgh agreement.[114] The general regulatory goal of the Pittsburgh agreement was to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse.[115] The Pittsburgh agreement made it necessary to extend the scope of the regulatory regime in many ways to OTC derivative contracts.[116]

MiFID II thus was part of a major legislative reaction to the perceived earlier failures of the regulatory regime. The general objectives of MiFID II were "to increase transparency, better protect investors, reinforce confidence, address unregulated areas, and ensure that supervisors are granted adequate powers to fulfil their tasks".[117] The scope and internal coherence of the regulatory regime played an important role in achieving the objectives. It was deemed "necessary to establish a comprehensive regulatory regime governing the execution of transactions in financial instruments irrespective of the trading methods used to conclude those transactions."[118] It was also deemed necessary to improve corporate governance in a number of financial institutions.[119]

The Capital Markets Union action plan. On its inauguration in November 2014, the Juncker Commission launched an Investment Plan. The core regulatory

110 Recital 2 of Directive 2013/36/EU (Capital Requirements Directive).

111 Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories.

112 Article 1 of Regulation 648/2012 (EMIR).

113 Article 4(1) of Regulation 648/2012 (EMIR). Recital 13 of Regulation 648/2012 (EMIR): "Incentives to promote the use of CCPs have not proven to be sufficient to ensure that standardised OTC derivative contracts are in fact cleared centrally. Mandatory CCP clearing requirements for those OTC derivative contracts that can be cleared centrally are therefore necessary."

114 Recital 5 of Regulation 648/2012 (EMIR).

115 Recitals 7–8 of Regulation 648/2012 (EMIR).

116 See recital 25 of Regulation 648/2012 (EMIR).

117 Recital 4 of Directive 2014/65/EU (MiFID II).

118 Recital 13 of Directive 2014/65/EU.

119 Recital 5 of Directive 2014/65/EU (MiFID II).

initiatives of the plan consisted of the Single Digital Market, the Single Energy Market, and the Capital Markets Union (CMU). Work on the CMU was started by the UK's commissioner Jonathan Hill in 2015 before the Brexit referendum. In September 2015, the Commission launched a particular Capital Markets Union action plan.[120]

The CMU action plan followed the adoption of MiFID II. On one hand, it was a reaction to increased regulation that was perceived as too restrictive by banks. On the other, it was a move towards increased regulation designed to facilitate market integration and increase the cross-border sales of financial products.

The Commission's priorities are constrained by the goals of the EU. According to the action plan, "the Commission's top priority is to strengthen Europe's economy and stimulate investment to create jobs".[121] This reflects the broad range of goals laid down by Article 3 of the Treaty on European Union.[122]

The proposed way to strengthen economy and stimulate investment is through "stronger capital markets" that "would provide new sources of funding for business, help increase options for savers and make the economy more resilient".[123] In the action plan, the Commission points out that "Europe's capital markets are still relatively underdeveloped and fragmented". Although "[t]he European economy is as big as the American one, Europe's equity markets are less than half the size, its debt markets less than a third". The European Commission therefore assumes that there is massive gap between the present size of the European capital market and its potential.[124]

To address the problem, the Commission wants more integration. It wants to "build a true single market for capital" and argues that "[m]ore integrated capital markets will lead to efficiency gains and support Europe's ability to fund growth".[125]

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120 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final.

121 *Ibid.*, Introduction.

122 Subparagraph 1 of Article 3(3) of the Treaty on European Union: "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance." Article 3(4) of the Treaty on European Union: "The Union shall establish an economic and monetary union whose currency is the euro."

123 Action Plan on Building a Capital Markets Union, Introduction.

124 See even European IPO Task Force (2015) p 19.

125 Action Plan on Building a Capital Markets Union, Introduction.

The CMU action plan seems to be a reaction to Basel III and the CRD IV package that strengthened capital requirements for banks.[126] It is designed to "free up capacity on banks' balance sheets and increase their ability to lend".[127]

Moreover, the action plan seems to go back to the purposes of the ISD and MiFID. It proposes action designed to increase the cross-border business of large financial intermediaries that have the means to sell financial products to consumers and SMEs in a larger market. The language of the action plan suggests that savers will be connected with SMEs, but what the action plan really means is that savers will be connected with international financial intermediaries.

The Single Rulebook. After the introduction of the Financial Services Action Plan (FSAP), new rules were made in accordance with the Lamfalussy process. While the process increased the scope of EU financial services legislation, some problems remained. The problems were related to the choice of directives as the legislative instrument employed for the purpose of harmonising Member States' laws. Since directives are implemented rather than directly applicable in the Member States, each Member State ended up having its own rulebook. This increased compliance costs for large financial intermediaries that sold products in many Member States and contributed to the low level of cross-border retail business.[128] The single rulebook emerged as a way to address these problems.

The single rulebook is not a legal term. It is a political concept.[129] It can be understood as an approach to securities regulation and as one of the political goals of securities law.[130]

The single rulebook means in practice the use of regulations rather than directives. Since regulations are directly applicable as national law in each Member State,[131] they can form the basis of a common rulebook for all Member States.

A single rulebook was proposed by Tommaso Padoa-Schioppa in a speech in 2004.[132] The idea was in effect included in the recommendations of the 2009 re-

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126 See even Admati A, Hellwig M (2013) p 1: "As in the years before the crisis, bankers have been lobbying relentlessly and speaking up in public against tighter banking regulation."

127 Action Plan on Building a Capital Markets Union, Chapter 5.

128 Padoa-Schioppa T (2004): "As financial groups expand on a cross-border basis, they are increasingly confronted with a tension between the cross-country geographical scope of their strategy and the national segmentation of supervisory arrangements. This results in high compliance costs, which are ultimately borne by customers and act as a barrier to integration."

129 Lefterov A (2015) p 7.

130 *Ibid.*, p 10.

131 Article 288 of the TFEU.

132 Padoa-Schioppa T (2004): "Let me start with the single rulebook. By this I mean a streamlined, uniform and flexible regulatory framework across the EU. This rulebook would be adopted

port by the de Larosière Group.[133] The Commission referred to a single rulebook in its Communication European Financial Supervision in May 2009.[134] The de Larosière recommendations and the proposals of the Commission were embraced by the Brussels European Council in June 2009.[135] Since 2009, "[r]evisions of almost all existing directives in the financial services sector were adopted, very often in the form of directly applicable regulations".[136] In its Green Paper, the Commission chose a single rulebook for financial services as one of the key principles that the Capital Markets Union should be based on.[137]

In the light of the fact that EU securities law traditionally has been based on a piece-meal approach,[138] the single rulebook could be described as a "collection of individual legal acts" each with its own particular characteristics.[139]

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by the level 2 regulatory committee. It would allow pan-European banking groups to deal with a single set of rules across their organisation and hence to reduce compliance costs substantially. Today, financial groups are instead confronted with widely diverging national rulebooks, in spite of their common source in Community law. An additional advantage of a single rulebook enshrined in secondary EU legislation is that it can be easily adapted to changing market conditions, under the 'comitology' procedure. The review of banks' capital requirements would offer a unique opportunity to establish such a rulebook for a major component of the present legislation."

133 Report by the High level group on financial supervision in the EU, chaired by Jacques de Larosière. Brussels, 25 February 2009. See Recommendation 10: "In order to tackle the current absence of a truly harmonised set of core rules in the EU, the Group recommends that: Member States and the European Parliament should avoid in the future legislation that permits inconsistent transposition and application ..."

134 Communication from the Commission: European Financial Supervision, COM(2009) 252 final: "In parallel, differences in the national transposition of Community law stemming from exceptions, derogations, additions or ambiguities in current directives must be identified and removed, so that one harmonised core set of standards (a single rulebook) can be defined and applied throughout the EU by all supervisors."

135 European Council, Brussels, 18 and 19 June 2009, Presidency Conclusions.

136 Lefterov A (2015) p 6.

137 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, p 5: "A Capital Markets Union should be based on the following key principles: – it should maximise the benefits of capital markets for the economy, jobs and growth; – it should create a single market for capital for all 28 Member States by removing barriers to cross-border investment within the EU and fostering stronger connections with global capital markets; – it should be built on firm foundations of financial stability, with a single rulebook for financial services which is effectively and consistently enforced; – it should ensure an effective level of consumer and investor protection; and – it should help to attract investment from all over the world and increase EU competitiveness."

138 See, for example, Moloney N (2004).

139 Lefterov A (2015) p 8.

One can note that the single rulebook does not mean maximum harmonisation.[140] For example, harmonisation is constrained by the principles of conferral, subsidiarity and proportionality.[141]

Prospectus Regulation. The Prospectus Regulation[142] is an example of the recent regulatory approach. Recital 83 of the Prospectus Regulation contains a list of principles the Commission should follow in exercising its delegated and implementing powers in accordance with the Regulation. Because of the need to ensure the coherence of EU law, the principles listed in the Prospectus Regulation can provide evidence of the objectives of EU securities law in general.

Recital 83 lists the following principles:

- "the need to ensure confidence in financial markets among retail investors and SMEs by promoting high standards of transparency in financial markets,
- the need to calibrate the disclosure requirements of a prospectus taking into account the size of the issuer and the information which an issuer is already required to disclose under Directive 2004/109/EC and Regulation (EU) No 596/2014,
- the need to facilitate access to capital markets for SMEs while ensuring investor confidence in investing in such companies,
- the need to provide investors with a wide range of competing investment opportunities and a level of disclosure and protection tailored to their circumstances,
- the need to ensure that independent regulatory authorities enforce the rules consistently, especially as regards the fight against white-collar crime,
- the need for a high level of transparency and consultation with all market participants and with the European Parliament and the Council,
- the need to encourage innovation in financial markets if they are to be dynamic and efficient,
- the need to ensure systemic stability of the financial system by close and reactive monitoring of financial innovation,
- the importance of reducing the cost of, and increasing access to, capital,
- the need to balance, on a long-term basis, the costs and benefits to all market participants of any implementing measure,

140 *Ibid.*, p 10.

141 Article 5(1) of the Treaty on European Union: "The limits of Union competences are governed by the principle of conferral. The use of Union competences is governed by the principles of subsidiarity and proportionality." See Lefterov A (2015) p 19.

142 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

- the need to foster the international competitiveness of the Union's financial markets without prejudice to a much-needed extension of international co-operation,
- the need to achieve a level playing field for all market participants by establishing Union law every time it is appropriate,
- the need to ensure coherence with other Union law in the same area, as imbalances in information and a lack of transparency might jeopardise the operation of the markets and above all harm consumers and small investors."

This list of principles is longer than the list of objectives introduced in the US by the Securities Acts Amendments of 1975 (section 4.2.4). The SEC has noted that those objectives can be "difficult to reconcile".[143] The same can probably be said of the numerous principles mentioned in the Prospectus Regulation.

Conclusions. EU securities law has multiple goals that can be difficult to reconcile. They are based on the strategic goals laid down by Article 3 of the Treaty on European Union.[144] The main goal of the Investment Services Directive (ISD) and the Markets in Financial Instruments Directive (MiFID) was to create an internal market. The single rulebook approach contributes to the creation of an internal market. MiFID II was a reaction to market failure. The Capital Markets Union action plan shows that industrial policy plays an important role in the development of EU securities law. Recital 83 of the Prospectus Regulation gives information about multiple design principles for EU securities law. EU securities law does not necessarily have the same goals as US securities regulation, and it would clearly be wrong to say that the regulatory objectives of EU securities law are limited to "effectiveness" or "market efficiency",[145] whatever such notions might mean in this context.

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143 SEC Release No. 34 – 61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), p 11.

144 Subparagraph 1 of Article 3(3) of the Treaty on European Union (TEU): "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance." Article 3(4) TEU: "The Union shall establish an economic and monetary union whose currency is the euro."

145 See nevertheless Kalss S (2017) p 490 number 1: "In addition, capital market law is an area of law that opens up economic arrangements in a very specific manner, because the provisions of capital market law are regularly underpinned by economic considerations." *Ibid.*, pp 504 – 505 paragraph 37: "The importance of efficiency as a guideline for the interpretation of capital market law has already been set out … Capital market law is an area that is open to economic con-

4.2.6 Conclusions

The objectives of securities law depend on political preferences. Securities law is the result of multiple political considerations and has multiple objectives both in the EU and the US. Generally, the interests of non-financial issuer-firms have not played any major role. The evolution of German stock exchange law before the European internal market seems to have been the exception from the rule. Generally, the interests of financial intermediaries and investors have been much more important. This may have contributed to a regulatory framework that is harder for non-financial issuer-firms to accept and may even have helped to reduce the number of publicly-traded companies. As regards investor protection, the MiFID regime builds on two-tiered investor protection with a distinction between retail and professional investors, whereas the US regulatory scheme protects investors, with some carve-outs for sophisticated investors.[146]

4.3 Company Law or Securities Law, Disclosure or Merit Review, Private or Public Enforcement

The goals of securities law can be achieved in various ways. One can achieve them in company law or securities law. One can distinguish between the disclosure-based approach to regulation and the merit review approach.[147] The choice between these two approaches is also a choice between the self-protection of investors and state supervision.[148] Moreover, rules can be made by a state regulator or non-state parties such as stock exchanges. The enforcement of sanctions can be left to market participants or allocated to the state. We can briefly discuss these issues.

Company law or securities law. To begin with, norms belonging to company or securities law can in many cases be functional equivalents. This can be illustrated with the nature of company and securities law in the US, France, Germany, and the EU.

While US company law statutes tend to have a rather limited scope, many questions relating to corporate finance and corporate governance fall within the scope of securities law. German company law has a broader scope and can

siderations in a special way. The reason for this is that effectiveness is cited as a regulatory objective at several points in the provisions."

146 Boskovic T, Cerruti C, Noel M (2010) p vii.

147 Wroldsen JS (2013) pp 606 – 611.

148 Fleckner AM, Hopt KJ (2013) p 540.

address some issues that in the US would be regulated in securities law: "Policymakers of the nineteenth century increasingly tried to fight the abuses at the exchanges by regulating those who issued the items (share and bonds) that were most heavily traded: the stock corporations."[149] The same can be said of French company law.[150]

The existence of functional equivalents has influenced company and securities law in the EU. Since different corporate governance models are used across the Member States, EU securities law is designed to be "functional for the purpose of setting out rules aiming to achieve a particular outcome irrespective of the national company law".[151] To name an example from company law, it does not matter whether a unitary or a dual board structure is used.[152]

A comparative study of particular aspects of US, French, and German "company law" or "securities law", as the case may be, would not give a true and fair view unless all relevant functional equivalents were taken into account.[153]

Disclosure-based approach. We can move on to the disclosure-based approach to securities regulation. Its rationale was famously captured by Justice Brandeis: "Sunlight is said to be the best of disinfectants; electric light the most efficient policeman."[154]

Under the disclosure-based model, securities regulation is effected by requiring disclosures and imposing sanctions for false or misleading statements. The disclosure-based approach of securities regulation is characteristic of the US federal securities law regime.[155]

The disclosure model relies on the assumption that market participants actually read and understand disclosures and take rational decisions on the basis of such data. The disclosure model has a connection to the efficient-market hypothesis[156] or myth. In practice, the disclosure model can lead to information

149 *Ibid.*

150 Fanto JA (1998a) p 31: "French corporate law and securities law are not separate legal topics, but are part of the same legal code."

151 Recital 55 of Directive 2014/65/EU (MiFID II).

152 See, for example, Article 9(6) of Directive 2004/25/EC (Directive on takeover bids) and Article 38 of Regulation (EC) No 2157/2001 (SE Regulation).

153 Fleckner AM, Hopt KJ (2013) p 538: "[B]efore the end of the nineteenth century, Germany had hardly any exchange regulation that would constitute stock exchange law in a technical sense ... [M]any of the later Exchange Act's goals were pursued through other regulatory strategies ... A functional analysis of the stock exchange law's evolution would miss an important part of the picture if it ignored these regulatory approaches."

154 Brandeis LD (1914).

155 Wroldsen JS (2013) pp 606 – 611.

156 Fama EF (1970).

overload and increase noise (section 6.4.10). Moreover, few investors have the resources to track disclosures and the knowledge to understand them,[157] most investors can benefit from disclosures only indirectly,[158] and people generally are only to a limited extent mathematically-rational. The disclosure model has been under scrutiny since the financial crisis of 2007–2009.

Merit-review approach. The merit-review approach "goes beyond the mere requirement of information disclosure to include meritreview by the state".[159]

The merit-review approach is characteristic of EU securities law. It complements the disclosure approach. To create an internal market, it has been deemed necessary to require home-country control and the approximation of the substantive rules that apply to securities markets, securities issuings, securities trading, and investment services. In the US, state "blue sky" laws historically have focused on merit review.[160]

Generally, merit-based regulation could be appropriate for markets that have a large number of unsophisticated retail investors but lack professional analysts.[161]

Regulation by the state or stock exchanges. The chosen objectives of state regulation can influence the allocation of powers between the state and non-state rule-makers such as the operators of stock exchanges. The allocation of regulatory responsibilities depends on the country.[162]

Gadinis and Jackson distinguish between the traditional government-led model (France, Germany, and Japan) under which central governments are the source of securities markets regulation and supervision, the flexibility model (the UK, Hong Kong, and Australia) that traditionally has relied more heavily on market participants, and the cooperation model (the US and Canada)

157 Kitch EW (2001) p 649: "In recent years, it has become common for analysts of mandatory disclosure to accept the point that helpless investors will not be helped by the disclosure documents."

158 Douglas WO, Bates GE (1933) pp 171–172.

159 Wroldsen JS (2013) pp 606–611.

160 *Ibid.*

161 *Ibid.*, citing Huang RH (2011) pp 278–279.

162 Gadinis S, Jackson HE (2007) pp 1244–1245: "We identify three key similarities in all the jurisdictions we survey. First, the scope of market oversight is comparable. Second, at least with regard to their own trading rules, stock exchanges in all eight jurisdictions maintain certain self-regulatory powers. Third, all jurisdictions use a multifaceted regulatory structure, where a variety of public bodies have oversight powers. The allocation of regulatory responsibilities within the eight jurisdictions of our survey, however, is substantially different. The mechanisms of oversight and cooperation between self-regulatory organizations ('SROs') and government agencies, moreover, vary significantly."

under which the regulatory powers of stock exchanges extend over most issues but are exercised under close supervision by government agencies.[163]

Stock exchanges predate government agencies as regulators of equity trading markets[164] and have had an important regulatory function in the past. Under the flexibility model, the regulatory philosophy of cooperation with market participants typically is reflected in the issuing of guidance rather than mandatory rules.[165] The downside with such soft rules is the lack of effective sanctions.[166] After the de-mutualisation, incorporation, and listing of stock exchanges, there were concerns about the quality of stock exchanges as regulators.[167] State regulation and supervision became more important regardless of the model.

After the financial crisis of 2007–2009, the trend has been towards more state regulation and the regulation of previously private markets.[168] Since the regulatory function of exchanges is exercised in the context of an existing legal framework, increased state regulation reduces the role of exchanges as regulators.[169]

The EU has contributed to the convergence of the allocation of regulatory powers with extensive EU regulation, a common rulebook approach, and a competent financial supervision authority in each Member State with largely standardised powers.[170] The single passport principle and home country control require the harmonisation of laws and competent national authorities. MiFID mandated the Member States to provide for rules that govern "regulated markets" and to establish national authorities that supervise regulated markets.[171]

The roots of today's EU regulation were perhaps planted in late nineteenth-century Germany: "[A decade after] the first stock corporation law reform (1870) … Germany struck a new social and economic path, followed until today, that

163 *Ibid.*, p 1245.
164 *Ibid.*, pp 1246–1248.
165 Gadinis S, Jackson HE (2007) p 1245.
166 Christiansen H, Koldertsova A (2009) p 217: "As most governance recommendations remain in the form of contractual "soft" rules, punitive measures that can be adopted by exchanges in relation to breaches of governance requirements are limited in most cases."
167 See Macey JR, O'Hara M (2005); Aggarwal R, Ferrell A, Katz J (2007).
168 See Ferrarini G, Saguato P (2014) pp 6–7 on some private markets becoming "semi-private" and, conversely, some markets becoming "semi-public" as a result of the softening of either pre- or post-trade transparency.
169 Christiansen H, Koldertsova A (2009) p 212.
170 Fleckner AM, Hopt KJ (2013) p 545: "A factor that has become increasingly important in the evolution of German stock exchange law is the harmonization on the European level."
171 See *ibid.*, p 549.

turned out to be a Sonderweg (separate path) compared to other countries' approaches … [W]ith the second stock corporation law reform, Germany's law on stock corporations (1884) became more restrictive than any other major regime."[172] The trend is a merit review approach based on state or EU regulation and complemented by a mandatory legal capital regime in company law.[173]

Public or private enforcement of sanctions. In company law, the main rule is the private enforcement of sanctions. In securities law, the main rule is public enforcement.

La Porta and co-authors found "little evidence that public enforcement benefits stock markets, but strong evidence that laws mandating disclosure and facilitating private enforcement through liability rules benefit stock markets" after studying the securities laws of 49 countries and their connection to the external-market-capitalisation-to-GDP ratio.[174] La Porta and co-authors had assumed that investors, on average, are "not tricked" and "pay lower prices for the equity when they are unprotected, and the amount of equity issued is lower".[175] However, their study raises questions.

One may ask whether the causation assumed by La Porta and co-authors really exists. On one hand, US regulators have relied on disclosures since the adoption of the Securities Acts. The US has a private litigation culture with contingency fees, each party paying its own costs, and class actions. On the other, stock valuations are high in the US. But there was no trace of causation between the two in 2020. Before the coronavirus crisis of 2020, stock prices were inflated regardless of the underlying quality of the economy. Stock prices were high due to the lack of liquid investment alternatives and the fact that the FED and other central banks pumped liquidity into markets in an effort to rescue the economy (central bank capitalism). In 2020, markets were again inflated by massive public rescue packages.[176]

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172 *Ibid*., p 541.

173 For the EU legal capital regime, see Mäntysaari P (2010c) sections 5.3–5.4.

174 La Porta R, Lopez-de-Silanes F, Shleifer A (2006), Abstract.

175 *Ibid*., p 5: "This enforcement-based reasoning forms the analytical foundation of the case for securities laws. Market mechanisms and litigation supporting private contracting may be too expensive. Since investors, on average, are not tricked, they pay lower prices for the equity when they are unprotected, and the amount of equity issued is lower … Securities laws, in so far as they reduce the costs of contracting and resolving disputes, can encourage equity financing of firms and stock market development."

176 BIS Quarterly Review, September 2020. See even Robin Wigglesworth, Investors baffled by soaring stocks in 'monster' depression. Financial Times, 24 April 2020; Richard Henderson, US equity valuations reach near two-decade high after rally. Financial Times, 24 April 2020.

One may also ask whether La Porta have taken into account all relevant norms. Stock markets are created by a regulatory framework that consists of all relevant "rules of the game". The relevant regulatory framework is not limited to norms that in the US are classified as "securities law" norms but may even include norms that belong to stock exchange law, company law, or other areas of law.

Moreover, high stock valuations in the US can be the outcome of things that are not normative. Other than regulatory issues may have played a role. For example, it is possible that valuations in the US stock market are increased by the fact that global investors in practice must invest in assets denominated in US dollars. Institutional investors in practice cannot avoid the US stock market because of its large size, because half of international trade is invoiced in US dollars, because half of international loans and global debt securities are denominated in US dollars, and because the US dollar is the world's dominant reserve currency.[177]

What one may learn from the study by La Porta and co-authors is that there is "little evidence that public enforcement benefits stock markets".

In practice, however, public enforcement should prevail. While it may be difficult to prove causation between public enforcement and the quality of securities markets, there does not seem to be any viable alternative to public enforcement where the goal is effective enforcement.[178] First, private enforcement must be limited. Private enforcement tends to require extensive and expensive litigation.[179] Making it accessible to many market participants would mean opening the floodgates to litigation, which is something that both legislators and courts have been trying to avoid in tort law and securities law.[180] Second, exposure to high legal risk and a high risk of being sued increases the cost of having publicly-traded shares and is likely to reduce the number of companies with such shares. Third, public enforcement makes it easier to optimise the enforcement of sanctions in the light of conflicting policy interests.

In the EU, Member States generally have a duty to provide for effective sanctions for the breach of EU securities law. For example, both MiFID II and the Prospectus Regulation require administrative sanctions that are "effective, pro-

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177 See, for example, Congressional Research Service, The U.S. Dollar as the World's Dominant Reserve Currency, December 18, 2020.

178 Public enforcement leads to more actions in Singapore and Hong Kong according to Wan WY, Chen C, Goo SH (2019).

179 See even La Porta R, Lopez-de-Silanes F, Shleifer A (2006) p 4.

180 See Coester M, Markesinis B (2003); Coffee JC Jr (2006).

portionate and dissuasive" without prejudice to the right of Member States to provide for and impose criminal sanctions.[181]

Conclusions. Stock markets increasingly rely on state regulation. In the US, the disclosure-based approach has contributed to information overload and increased noise. In EU securities law, the merit-review approach prevails. It is customary to limit exposure to private litigation in order not to open the floodgates. Increased use of state regulation and the merit-review approach can be complemented by increased use of public enforcement.

4.4 The Capital Markets Union

4.4.1 General Remarks

In the near future, the evolution of EU securities law is expected to follow the European Commission's Capital Markets Union (CMU) action plan. The action plan contains several broad proposals relating to alternative sources of funding, bank lending, infrastructure investment, and barriers to cross-border investment. It is an evolutionary development with multiple objectives.

The action plan was preceded by a Green Paper.[182] In the Green Paper, the Commission argued that a CMU should be based on certain key principles. It is not surprising that the key principles largely reflect the express provisions of the Treaty on the Functioning of the European Union (TFEU).

According to the Green Paper,[183] the CMU should maximise the benefits of capital markets for the economy, jobs and growth.[184] The CMU should create a single market for capital for all Member States by removing barriers to cross-border investment within the EU and by fostering stronger connections with global capital markets.[185] The CMU should be built on firm foundations of financial stability[186] with a single rulebook for financial services that is effectively and consistently enforced. The CMU should ensure an effective level of consumer and in-

181 Recitals 141 and 149 and Article 70(1) of Directive 2014/65/EU (MiFID II); recitals 74–76 and Article 38(1) of Regulation (EU) 2017/1129 (Prospectus Regulation).

182 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final.

183 *Ibid.*, Section 1.

184 This reflects Articles 9, 147(1) and 147(2) of the TFEU.

185 This reflects Article 26(2) of the TFEU.

186 This reflects Article 3(3) of the TEU.

vestor protection.[187] Moreover, the CMU should help to attract investment from all over the world and increase the competitiveness of the EU.[188]

In the CMU action plan, the Commission stated that its "top priority is to strengthen Europe's economy and stimulate investment to create jobs".[189] This reflects Article 3 of the Treaty on European Union (TEU).[190] The question nevertheless remains how jobs and growth can be increased. The initiative does not contain any policy instruments that would have a direct impact on GDP or employment.[191]

Generally, the CMU action plan seems to be motivated by industrial policy. It is based on the assumption that there is room for growth. The EU's public equity markets were half the size of US markets before Brexit. Growth is regarded as necessary for the EU to maintain or gain influence in capital markets. It is believed that only cross-border capital markets can help to achieve the necessary scale, because most EU Member States are too small to develop complex and liquid markets on their own.[192] Growth has become even more important after Brexit and the loss of a major financial hub.[193] At the same time, Brexit has provided an opportunity to develop financial centres in the Eurozone to compete against London. For example, Amsterdam emerged as the largest share trading centre in Europe in January 2021.[194]

The CMU action plan seems to be built around two key objectives. The first is creating more opportunities for intermediaries. The second is deeper financial in-

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187 Article 114(3) of the TFEU requires "a high level" of consumer protection.

188 This reflects Article 3(3) of the TEU.

189 Action Plan on Building a Capital Markets Union, Introduction.

190 Subparagraph 1 of Article 3(3) of the TEU: "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance." Article 3(4) of the TEU: "The Union shall establish an economic and monetary union whose currency is the euro."

191 Kudrna Z (2016) p 4.

192 *Ibid.*, p 9.

193 Kudrna Z (2016) p 9: "The UK is home to 27 percent of the EU's listed companies by market value and 40 percent of its listed SMEs; moreover, 46 percent of the EU's equity capital is raised through UK markets. The City of London is the undisputed financial center of Europe, which allows companies and investors to circumvent underdeveloped capital markets in their home countries."

194 Philip Stafford, Amsterdam ousts London as Europe's top share trading hub. Financial Times, 10 February 2021.

tegration. These two objectives are connected (sections 4.4.2 and 4.4.3).[195] In contrast, the CMU action plan is not designed to foster the interests of non-financial issuer-firms, foster the interests of retail investors, or increase the number of companies with publicly-traded shares.

4.4.2 Creating Opportunities for Intermediaries

The Commission's action plan and the Green Paper that preceded it seem to reflect the interests of financial intermediaries such as banks, fund managers, and institutional investors. They have reason to ask for regulatory change, because the policy of the ECB has created an environment with high liquid asset holdings and low interest rates.[196] The action plan is designed to help institutional investment[197] in a low interest rate environment.[198]

Low interest rates have caused problems for banks that need new sources of income to maintain their revenue levels.[199] According to the ECB, one important avenue for the adaptation of the banks' business model to the new economic and financial environment could be to enhance fee and commission-based activities.[200] The action plan does indeed propose actions that give banks a chance to charge more fees.

New rules on securitisation. The Commission is proposing work on a new regulatory framework for securitisation. The Commission explains why it is worth doing: "If EU securitisations could be revived – safely – to pre-crisis average is-

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195 Compare recital 1 of Regulation 2017/1129 (Prospectus Regulation) summing up the aims of the CMU: "The aim of the Capital Markets Union is to help businesses tap into more diverse sources of capital from anywhere within the European Union ('the Union'), make markets work more efficiently and offer investors and savers additional opportunities to put their money to work, in order to enhance growth and create jobs."

196 ECB, Financial Stability Review, November 2016, p 18.

197 See Green Paper, section 4.2, pp 16–18.

198 Action Plan on Building a Capital Markets Union, Chapter 4: "It is widely accepted that due to increasing life expectancy and changing demographics, retail investors need to save more to meet their retirement needs. Meanwhile, many institutional investors, operating in a low interest rate environment, cannot find sufficient investments that deliver the returns needed to meet their commitments."

199 See, for example, ECB, Financial Stability Review, November 2015, p 65, Box 5 entitled "Euro area banks' net interest margins and the low interest rate environment".

200 Kok C, Mirza H, Móré C, Pancaro C (2016) p 147; Andersson M, Kok C, Mirza H, Móré C, Moshtaf J (2018) p 133.

suance levels, banks would be able to provide an additional amount of credit to the private sector of more than EUR 100 billion."[201]

On one hand, increased use of securitisation would benefit banks by increasing the volume of business and fee income. Securitisation transactions tend to be large and complicated and generate plenty of fees for the banks that organise them.

On the other, securitisation transactions can also make it possible for banks to create high-risk or opaque products that can be sold without balance sheet constraints. Large-scale securitisation was one of the driving forces of the financial crisis of 2007–2009 that made it necessary to adopt stringer rules in the EU and worldwide.

In the action plan, the Commission proposed "an EU framework for simple, transparent and standardised (STS) securitisation, together with new prudential calibrations for banks in CRR" and "[e]quivalent calibrations for insurers through an amendment to the Solvency II Delegated Act".[202]

Insurance, Solvency II and infrastructure projects. The treatment of insurance in the action plan addresses two problems. The first is low interest rates. The second is the funding of large long-term infrastructure projects.

Insurance companies must comply with a solvency regime laid down by Solvency II.[203] The main objective of the solvency regime – and insurance and reinsurance regulation and supervision in general – is the adequate protection of policy holders and beneficiaries.[204] But just like banks, insurance companies suffer from low interest rates. Low interest rates have made it more difficult for insurance companies to generate enough income to cover their future payment obligations through the investment of insurance premiums.

Moreover, the Commission's proposals seem to reflect the fact that it has been difficult to attract funding for large long-term infrastructure projects.[205] Market investors and financial intermediaries that are risk-averse and have a short-term investment perspective have been unwilling to fund high-risk projects that are both large and long-term. This problem was partly addressed by the

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201 Action Plan on Building a Capital Markets Union, Introduction.

202 *Ibid.*, Chapter 5.

203 Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)

204 Recitals 16–17 of Directive 2009/138/EC (Solvency II).

205 In July 2015, the Commission published a consultation paper on the potential impact of Regulation 575/2013 (CRR) and Directive 2013/36/EU (CRD IV) on bank lending to the economy which includes a review of banks' capital requirements for long term and infrastructure finance.

ELTIF Regulation.[206] However, the ELTIF Regulation has a limited scope, because ELTIFs are just a qualified form of EU AIFs.[207] ELTIF units or shares are particularly designed for professional investors that are either long-term institutional investors[208] or speculators that hold the shares or units on a short-term basis before transferring them.[209] They can be marketed to retail investors provided that certain additional requirements are met.[210]

An investment environment with low interest rates is one of the reasons why the Commission wishes to remove prudential obstacles and pave the way for insurers to be able to invest more in European infrastructure projects. A further reason must be the lack of market funding for long-term infrastructure projects and the long-term nature of life insurance and pension insurance. Unlike other investors, insurance companies could be a source of funding for long-term infrastructure projects.[211]

To support infrastructure investment, the Commission proposed the adjustment of Solvency II calibrations for insurers' investment in infrastructure and European Long Term Investment Funds.[212]

206 Regulation (EU) 2015/760 of the European Parliament and of the Council of 29 April 2015 on European long-term investment funds. See also Action Plan on Building a Capital Markets Union, Section 3.1: "Until recently, cross-border infrastructure investment has been hampered by the absence of commonly recognised vehicles for capital-raising and investing. The … European Long Term Investment Fund (ELTIF) Regulation … creates a new cross-border fund vehicle for such long term projects …"

207 Recital 8 of Regulation 2015/760 (ELTIF Regulation): "… By definition, ELTIFs are EU AIFs that are managed by alternative investment fund managers (AIFMs) authorised in accordance with Directive 2011/61/EU." Recital 9: "… Accordingly, only an EU AIF as defined in Directive 2011/61/EU should be eligible to become an ELTIF and only if it is managed by an EU AIFM that has been authorised in accordance with Directive 2011/61/EU."

208 Recital 2 of Regulation 2015/760 (ELTIF Regulation).

209 Article 19(2) of Regulation 2015/760 (ELTIF Regulation).

210 Recital 43 of Regulation 2015/760 (ELTIF Regulation): "As ELTIFs target not only professional but also retail investors across the Union, it is necessary that certain additional requirements be added to the marketing requirements already laid down in Directive 2011/61/EU, in order to ensure an appropriate degree of retail investor protection …"

211 Action Plan on Building a Capital Markets Union, section 4.2: "Institutional investors, in particular life insurance companies and pension funds, are natural long term investors. However, in recent years they have been retrenching from investment in long term projects and companies."

212 *Ibid.*, section 3.1 and Annex I: "Support infrastructure investment. Adjust Solvency II calibrations for insurers' investment in infrastructure and European Long Term Investment Funds".

Moreover, the Commission proposed an "[a]ssessment of the prudential treatment of private equity and privately placed debt in Solvency II" to expand opportunities for institutional investors and fund managers.[213]

4.4.3 Deeper Financial Integration

The second major objective of the CMU is deeper integration. According to the Commission's Green Paper,[214] the Commission regards integration as a good thing that more or less automatically improves the "effectiveness of markets" and enables the EU to "achieve the benefits of greater market size and depth". This sounds too optimistic in the light of the fact that the Commission does not mention any potential drawbacks.[215]

The Commission's Green Paper highlighted the importance of competition. "Competition plays a key role in ensuring that consumers get the best products and services at adequate prices, and that investment flows are channelled towards the most productive uses. Entry barriers for competitors should be removed where possible and access to financial market infrastructure needs to be assured."[216]

However, the Commission is mainly interested in opening up national retail markets for international financial intermediaries. In the action plan, the Commission promises to "gather evidence on the main barriers to the cross-border distribution of investment funds". Regulatory barriers include "disproportionate marketing requirements, fees, and other administrative arrangements imposed by host countries and the tax environment".[217] The Commission also wants to

213 *Ibid.*, Annex I: "Expand opportunities for institutional investors and fund managers. Assessment of the prudential treatment of private equity and privately placed debt in Solvency II".
214 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final.
215 *Ibid.*, section 2.2, p 9: "Third, achieving bigger, more integrated and deeper capital markets will depend on overcoming the barriers that are fragmenting markets and holding back the development of specific market segments. Improving the effectiveness of markets would enable the EU to achieve the benefits of greater market size and depth. These include more competition, greater choice and lower costs for investors as well as a more efficient distribution of risk and better risk-sharing. More integrated capital markets, especially for equity, would enhance the shock-absorption capacity of the European economy and allow more investment without increasing levels of indebtedness. Well-functioning capital markets will improve the allocation of capital in the economy, facilitating entrepreneurial, risk-taking activities and investment in infrastructure and new technologies."
216 *Ibid.*, section 4.3, p 22.
217 Action Plan on Building a Capital Markets Union, section 4.2.

"make EU capital markets more attractive to international investors by eliminating legal and administrative cost to cross-border operations, and enhancing convergence of supervisory outcomes across Europe".[218]

The Commission seems to find the cross-border concentration of financial intermediation a good thing that can contribute to economies of scale.[219]

In the Green Paper, the Commission mentions the development of new technologies as an "important driver of the integration of capital markets". Moreover, the Commission mentions electronic trading platforms, high-frequency trading, fintech companies and crowdfunding.

In contrast, disruptive competition between existing financial intermediaries and suppliers of new kinds of financial services is not an important issue in the action plan. Neither does the Commission mention competition between (a) services provided by financial intermediaries on one hand and (b) services facilitating the non-use of traditional financial intermediaries on the other.[220]

The action plan seems to be designed to increase institutional investment and the business of established financial intermediaries.

4.4.4 The Interests of Retail Investors

While the CMU action plan seems to be designed to increase institutional investment and the business of financial intermediaries, it does not seem to be primarily designed to foster the interests of retail investors or non-financial firms. The interests of retail investors seem to be relevant only as a business opportunity for financial intermediaries.

It is pointed out in the action plan that low interest rates can be a problem for savers as well. First, "[i]t is widely accepted that due to increasing life expectancy and changing demographics, retail investors need to save more to meet

218 *Ibid.*, section 6.4.

219 *Ibid.*, section 4.1: "Market fragmentation prevents personal pension providers from maximising economies of scale, risk diversification and innovation, thereby reducing choice and increasing cost for pension savers."

220 See Green Paper, section 4.3, pp 25–26: "An important driver of the integration of capital markets is the rapid development of new technologies, which have contributed for example to the development of electronic trading platforms, high frequency trading and so-called 'FinTech' companies. 'Fintech' can be defined as the combination of innovative financial services and the availability of capital through the use of new (digital) technologies, such as crowdfunding. According to a recent report, since 2008 global investment in FinTech ventures has tripled to nearly $3 billion in 2013; this trend is set to continue, with global investment on track to grow to up to $8 billion by 2018."

their retirement needs".[221] Second, "retail investors in Europe have significant savings in bank accounts, but are less directly involved in capital markets than in the past. Direct share ownership of European households has dropped from 28% in 1975 to 10–11% since 2007 and the proportion of retail investors among all shareholders is less than half the level it was in the 1970s".[222]

This said, the action plan is not designed to increase retail investors' direct share ownership. Retail investors are not expected to invest directly: "Retail investors' appetite for investing directly into capital markets is generally small across the EU, being predominantly channelled through collective institutional investments."[223] In the Green Paper, the Commission proposed investment in mutual funds and restoring retail investors' trust in financial intermediaries.

4.4.5 The Interests of Non-Financial Firms

The CMU action plan does not seem to be based on any particular study of the interests of non-financial firms.

Neither the action plan nor the Green Paper mentioned the fact that financing conditions have been favourable for the non-financial private sector and supported its recovery after the financial crisis of 2007–2009.[224] Low interest rates are not a problem for the non-financial private sector that seeks funding provided that low-cost funding is available to borrowers.[225]

Neither the Green Paper nor the action plan studied funding holistically from the perspective of non-financial firms. The demand side seems to be regarded as the opposite of the funding supply side.[226] From the perspective of non-fi-

221 Action Plan on Building a Capital Markets Union, Chapter 4.

222 *Ibid.*, section 4.1.

223 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, section 4.2, pp 19–20: "Boosting retail investment. Retail investors' appetite for investing directly into capital markets is generally small across the EU, being predominantly channelled through collective institutional investments."

224 ECB, Financial Stability Review, November 2016, p 18: "In line with overall economic conditions, the euro area non-financial private sector has continued to recover, supported by favourable financing condition ..."

225 See, for example, ECB, Financial Stability Review, November 2015, p 65, Box 5 entitled "Euro area banks' net interest margins and the low interest rate environment".

226 See Green Paper, section 2.2, p 9: "In order to achieve the benefits of a fully integrated single market for capital, it is necessary to overcome challenges in particular in ... three key areas." The Commission mentions improving access to finance on the demand side, the flow of funds into capital market instruments on the supply side, and market integration.

nancial firms, however, this is not the case. Financial intermediaries can be suppliers of funding and ancillary services. Access to finance really is a question of access to funding and the ancillary services connected to funding (section 5.3). If the ancillary services are bad, access to finance is limited as firms may prefer to avoid the bad ancillary services. In practice, though, small firms access to debt funding is hampered by Basel III and CRD/CRR.

Growth firms. Neither the Green Paper nor the action plan contained very detailed proposals designed to foster the interests of growth firms.

In the Green Paper, the Commission chose to foster the interests of investors, in particular those of large institutional investors that do business in many countries. This is reflected in the Commission's views on corporate governance and minority shareholders' rights: "The protection of minority shareholder rights improves corporate governance and the attractiveness of companies for foreign investors, since these may often be minority investors. Another aspect of sound corporate governance is the efficiency of company boards in terms of controlling company managers. As company boards protect the interests of investors, efficient and well-functioning company boards are also key to attracting investment."[227] In the Green Paper, the Commission does not seem to be interested in whether its proposals would increase the number of issuers, that is, companies with publicly-traded shares. The proposals of the Commission are designed to please investors in general and large financial intermediaries in particular. It is open whether the Commission thinks that managers that run firms prefer a regulatory regime that lets financial investors control them more. Generally, regulatory regimes that facilitate innovation tend to protect managers against shareholders.[228]

The Green Paper did not contain too many proposals about how companies and issuers could benefit from technological advancement in the context of corporate governance, corporate finance, and company law. The Green Paper stated the obvious: "European and national company law has not kept pace with technological development, for example by insufficiently integrating the benefits of digitalisation." The Commission briefly mentioned replacing paper-based communication with "more efficient communication".[229] In the CMU action plan, the Commission recognised the existence of a funding problem: "Successful firms will need access to financing on attractive terms to fund their expansion. However, funding channels for growing firms seeking to raise equity capital or

227 *Ibid.*, p 24.
228 See Mäntysaari P (2012) Chapter 9.
229 Green Paper, section 4.3, p 26.

look for other forms of credit outside the banking system are underdeveloped in Europe. This is particularly the case for Europe's SMEs, which receive more than 75% of their external finance from bank loans. A successful Capital Markets Union (CMU) should broaden the range of financing options for growing companies."[230]

The action plan discussed the financing of the start-up phase, the early expansion phase, and SMEs.

As regards the financing of the start-up phase, the action plan mentioned "an increasing variety of non-bank financing options" ranging from "money-lending and donor platforms, businesses trading their invoices, peer-to-peer lending, to investment-based crowdfunding or support from business angels".[231] The action plan did not go into the details of how they should be developed.

As regards the early expansion phase, the action plan recognised "expansion finance as the stage where the EU financial system underperforms the most" and that "the missed opportunities for the EU society can be very large" as "these firms have the potential to grow into future large employers". The action plan focused on the role of venture capital and how EU law makes it possible for institutional investors and high net worth individuals to participate. For example, the Commission wanted to "increase the scale of venture capital funds in Europe". The Commission believed that "[t]he promotion of funds-of-funds could in particular help broaden private investment in venture capital by attracting institutional investors". The Commission mentioned that "[t]he Regulation on European Venture Capital Funds (EuVECA) and the Regulation on European Social Entrepreneurship Fund (EuSEF) in particular define the conditions under which these funds can be marketed to institutional and high net worth individuals across the EU". The Commission proposed changes that would, for example, "[allow] larger fund managers to establish and market EuVECA and EuSEF funds, reducing the investment threshold in order to attract more investors and expediting cross-border marketing and investment".[232] But funds-of-funds are notoriously expensive for retail investors.

Finally, as regards the financing of SMEs, the Commission mentioned in its action plan that "there is potential" for private placements to develop further in Europe[233] and that the "[c]larification of the treatment of loan-originating funds

230 Action Plan on Building a Capital Markets Union, Chapter 1.
231 *Ibid.*, section 1.1.
232 Action Plan on Building a Capital Markets Union, section 1.2. See also Regulation (EU) No 345/2013 (EuVECA); Regulation (EU) No 346/2013 (EuSEF).
233 Action Plan on Building a Capital Markets Union, section 1.5.

in the regulatory framework could facilitate cross border development".[234] Moreover, the action plan focused on "[t]he information gap between SMEs and investors".[235] However, the action plan did not propose any new instruments for the financing of SMEs.

Making it easier for companies to issue shares to the public. The EU wants to stimulate the issuing of shares to the public, because the European stock market is smaller than the US stock market. Moreover, SMEs have a bigger share of the GDP but much more limited access to non-bank financing in the EU. It can take a long time to close the gap to the US.[236]

In the CMU action plan, the Commission recognised that "[p]ublic markets are vital for the transition of high growth mid-sized companies to established global players".

The Commission discussed the direct initial and ongoing listing costs as a barrier to IPOs: "For example, the recent EU IPO Task Force report estimates the cost of listing fees alone in IPOs of deal size below EUR 6 million to be 10 – 15 % of the deal value. In comparison, for larger deals (EUR 50 – 100 million) these fees are about 5 – 8 %. At present, many SMEs consider these initial (and the ongoing) listing costs outweigh the benefits of going public. Reducing entry costs could allow more companies to raise capital on public markets."

To reduce costs, the Commission proposed two things. First, the Commission proposed to review the Prospectus Directive.[237] Second, the Commission would focus on the implementation of the provisions of MiFID II on SME growth markets to ensure that "the requirements applying to them strike the right balance between providing sufficient investor protection and avoiding unnecessary administrative burden".[238]

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234 *Ibid*., section 1.4.

235 *Ibid*., section 1.3.

236 Kudrna Z (2016) p 6: "The EU also needs to stimulate the issuance of equities, which the CMU aims to achieve by streamlining rules for securities prospectuses and simplifying market entry. This is particularly important because SMEs contribute a higher proportion of GDP in the EU than they do in the United States, but their access to non-bank financing is much more limited in the EU. The EU can emulate some US measures introduced in support of start-ups and other small firms by reducing access barriers to public training platforms and by developing venture capital, private financing, and crowdfunding. However, since the stock exchanges and financing platforms for SMEs have appeared only recently and only in a few EU countries, it will take a long time before private actors use and scale these improvements to volumes comparable to the United States."

237 Action Plan on Building a Capital Markets Union, Chapter 7.

238 *Ibid*., Chapter 2.

Prospectus. Prospectus requirements have been "harmonised to enable the comparison of investment opportunities across the EU". However, prospectus requirements have become too expensive without being sufficiently useful for investors according to the Commission. Not only are prospectuses "costly and onerous to produce, particularly for SMEs, and typically run to hundreds of pages". Prospectuses can even be "complex and excessively detailed" in the light of the information needs of investors, making "the information which is critical for investment … hard to discern".[239]

For these reasons, the Commission wanted to "update when a prospectus is needed, streamline the information required and the approval process, and create a genuinely proportionate regime for SMEs to draw up a prospectus and access capital markets".[240]

There is now a new Prospectus Regulation.[241] The Prospectus Regulation is intended to work as an "essential step towards the completion of the Capital Markets Union."[242]

Brexit. After Brexit, the UK is a so-called third country. Without an agreement between the UK and the EU in place, UK companies will no longer be able to benefit from a passport to carry out regulated services and activities throughout the EU subject to home country control.[243]

This may lead to changes in regulation. The potential changes can be illustrated with three examples. First, the EU could choose to increase the convergence of securities law by using the common rulebook approach. Second, the clearing of euro-denominated securities could be repatriated to the Eurozone. Third, the practice of delegation could change. The practice of delegation means that large asset managers that sell funds in Europe frequently delegate portfolio management functions to London or New York.[244] Stricter delegation rules could make it easier for the Member States to capture a slice of the UK's asset management market. Alternatively, the EU could choose to rely on London

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239 *Ibid.*, Chapter 2.

240 *Ibid.*, Chapter 2.

241 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

242 Recital 1 of Regulation 2017/1129 (Prospectus Regulation).

243 See, for example, Berger H, Badenhoop N (2018); Ringe WG (2018) pp 3–5 and 9.

244 Chris Flood and Siobhan Riding, Sweeping reform needed after Brexit, says French regulator. Financial Times, 10 June 2019.

as its financial hub.[245] This obviously would not be in the long-term interests of the EU.

4.4.6 Conclusions

The European Commission's CMU action plan seems to be motivated by industrial policy. Its purpose is to close the gap to the US. For this to happen, the Commission wants to increase cross-border transactions and market integration.

The Commission seems to focus on the business of financial intermediaries rather than the interests of retail investors and non-financial firms. The CMU action plan seams to be a reaction to Basel III and the CRD IV package as well as low interest rales. The proposed actions suffer from a perspective that is too narrow and not sufficiently holistic.[246] For example, from the perspective of entrepreneurs and firms, the demand side is not the opposite of the funding only supply side. Entrepreneurs and firms need ancillary services as well. The Commission does not seem to understand the importance and cost of ancillary services.

The CMU action plan therefore does not seem likely to increase the number of companies with publicly-traded shares and retail investors' direct shareholdings.

4.5 US Reforms

US securities law has been amended on numerous occasions and for various reasons. There is no overriding plan. Unlike reforms in US stock exchange law, improvements in US securities law have been incremental rather than radical.

Turn of the millennium. There were various proposals for the reform of securities law in US scholarship at the turn of the millennium.[247] It was already under-

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245 This was suggested by Ringe WG (2018) as a way to avoid a lose-lose situation.

246 See even Kudrna Z (2016) p 7 on the lack of a holistic perspective: "The CMU can reduce home bias by lowering the costs of cross-border transactions and facilitating information flows … However, these steps require reducing impediments that stem from national differences in supervisory, regulatory, tax, and legal practices as well as, ultimately, cultural and language barriers."

247 See Kitch EW (2001); Prentice R (2002) p 1399: "For example, Congress might well look at the writings of Professor Paul Mahoney and Professor Adam Pritchard, who have both recommended a dramatically reduced role for current enforcement mechanisms and an attendant in-

stood that corporations and corporate scholarship had moved from managerialism to the financial business model[248] and the contractarian theory of company law. This influenced securities law scholarship.[249]

The proposals included replacing federal securities law with state regulation and the freedom to choose the governing law (such as Delaware law),[250] increasing the power and responsibility of stock exchanges,[251] replacing the regulation of issuers and middlemen with regulation reflecting the characteristics of different categories of investors and increased use of default rules and contracting,[252] and applying behavioural finance.[253]

Securities law reforms stalled soon after the turn of the millenium for three reasons. First, powerful institutional investors did not seem to need a reform. US securities law is perceived as investor-friendly.[254] Second, US scholars regard the Securities Acts and the SEC as a success and as a model for the rest of the world.[255] Even after the Enron scandal,[256] US scholars tended to regard US corporate governance as "well above average".[257] The same can be said of their views on the Anglo-American common law system in general.[258] Third, legislators and scholars became distracted. The Enron scandal forced politicians to regulate cor-

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crease in the power and responsibility of stock exchanges. In the alternative, they might examine Professor Roberta Romano's proposal to largely replace federal securities regulation with state regulation in a system of competitive federalism. They also might study Professor Stephen Choi's plan to refocus regulatory attention from the professional actors in the securities system to the investors."

248 Lafer G (2017) pp 18 – 19; Appelbaum E, Batt R (2014) p 27.

249 Romano R (1998); Kitch EW (2005).

250 Romano R (1998).

251 Mahoney PG (1997); Pritchard AC (1999); Gadinis S, Jackson HE (2007).

252 Choi S (2000).

253 Prentice R (2002).

254 *Ibid.*, p 1399: "After eight years of investor-friendly Securities and Exchange Commission (SEC) leadership by Arthur Levitt, Congress is contemplating a top-to-bottom review of all federal securities laws …"

255 See Kitch EW (2001) p 630. See also Hopt KJ (2019a) III.1(b).

256 See Blair MM (2003) criticising conventional wisdom and arguing for the team production theory described in Blair MM, Stout LA (1999).

257 Holmström B, Kaplan SN (2003) p 8: "Despite the alleged flaws in its governance system, the U.S. economy has performed very well, both on an absolute basis and particularly relative to other countries. U.S. productivity gains in the past decade have been exceptional, and the U.S. stock market has consistently outperformed other world indices over the last two decades, including the period since the scandals broke. In other words, the broad evidence is not consistent with a failed U.S. system. If anything, it suggests a system that is well above average."

258 See, for example, La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1997); La Porta R, Lopez-de-Silanes F, Shleifer A (2008). Critically, for example, Siems MM (2007).

porate governance.[259] The financial crisis of 2007–2009 forced them to regulate banking.

Past reforms. There have been no fundamental regulatory reforms to replace the Securities Acts in the past. This said, the Securities Acts have been amended and complemented several times over the years.[260] One can highlight the following ten reforms: the ICA and the IAA, the Securities Acts Amendments of 1975, the integrated disclosures system, the creation of a national stock market, NSMIA, SOX, the JOBS Act, the Glass-Steagall Act, the Dodd-Frank Act, and Regulation Best Interest.

First, since the adoption of the Investment Company Act (ICA) and the Investment Advisers Act (IAA) in 1940, the mutual fund industry has grown and now dominates household investing.[261]

Second, the aims of the Securities Acts were amended in 1975 (section 4.2.4).

Third, there is now an integrated disclosure system under the Securities Act of 1933 and the Securities Exchange Act of 1934. The evolution of disclosure requirements has been described by the SEC in a 2016 Concept Release.[262]

Fourth, the creation of a national stock market changed the nature of trading and the structure of stock markets (Chapter 2). Changes in market structure reflect the markets' response to Regulation NMS[263] and the Order Handling Rules.[264]

Fifth, the deregulation of private offerings increased investments in venture capital funds. The National Securities Markets Improvement Act (NSMIA) of 1996 made it easier to set up large pools of private investors.[265] NSMIA exempted the sale of securities to "qualified purchasers" from state regulations known as blue-

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259 Prentice R (2002) p 1399 footnote 3: "Certainly the events of September 11, 2001, moved securities law reform down on the nation's, and the Senate's, list of priorities. The unfolding Enron scandal also will likely render any major deregulatory moves politically unpopular for at least a time."

260 See Mahoney PG, Rauterberg GV (2018).

261 See Ferrell A, Morley JD (2018).

262 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K).

263 SEC Release No. 34–51808 (June 9, 2005) (Regulation NMS).

264 SEC Release No. 34–37619 A (September 6, 1996) (Order Handling Rules).

265 Section 102(a) of the National Securities Markets Improvement Act of 1996, amending section 18 of the Securities Act of 1933. Ewens M, Farre-Mensa J (2020): "Among the 'covered securities' that NSMIA exempts from complying with state blue sky laws are those sold under Rule 506 of Regulation D, which allows private issuers to raise unlimited amounts of capital as long as all investors are 'accredited investors.' … Rule 506 is the most popular exemption used by VC-backed startups to avoid SEC registration."

sky laws that had created a patchwork of overlapping requirements in 52 separate jurisdictions.[266] NSMIA also exempted funds from registration through changes to the Investment Company Act of 1940:[267] "Facilitating VC funds' access to capital was a key reason why NSMIA added the Section 3(c)(7) registration exemption to the ICA."[268]

Sixth, the Sarbanes-Oxley Act of 2002 (SOX) changed corporate governance, increased disclosure obligations, increased the cost of a stock exchange listing, and may have reduced the number of IPOs.[269] In a 2009 survey, the top three compliance challenges for small companies thinking of going public were identified as SOX, corporate governance, and the SEC's Regulation Fair Disclosure (Regulation FD) of 2000. Regulation FD requires public disclosure when an issuer discloses material nonpublic information to certain individuals or entities.[270] This said, the decline of the small IPO market (IPOs raising less than USD 50 million) started already in 1998 and before SOX.[271] The decline started after the adoption of the Order Handling Rules of 1997 and Regulation Alternative Trading Systems (Regulation ATS) of 1998.[272]

Seventh, the Jumpstart Our Business Startups (JOBS) Act of 2012 was an attempt to generate more IPOs. The JOBS Act made it easier for companies to raise capital privately, stay private longer, or go public. Title IV of the JOBS Act directed the SEC to adopt rules exempting from the registration requirements of the Securities Act offerings of up to $50 million of securities annually.[273] Title III of the JOBS Act added an exemption from registration for certain crowdfunding

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266 Section 102(a) of the National Securities Markets Improvement Act of 1996, amending section 18 of the Securities Act of 1933.

267 NSMIA amended and added sections 3(c)(1) and 3(c)(7) of the Investment Company Act of 1940, respectively.

268 Ewens M, Farre-Mensa J (2020).

269 Aggarwal R, Ferrell A, Katz J (2007); Gao X, Ritter JR, Zhu Z (2013) pp 1663–1664: "Two main explanations for the prolonged drought in IPOs have been advanced. First, the Sarbanes-Oxley Act of 2002 (SOX), particularly Section 404, imposed additional compliance costs on publicly traded firms. As a percentage of revenue, these costs have been especially onerous for small firms. Consistent with the SOX explanation for the decline in IPO activity, the decline in IPOs has been most pronounced among small firms."

270 Gao X, Ritter JR, Zhu Z (2013) p 1664 footnote 1. Critically on Regulation FD, see also Weild D, Kim E, Newport L (2013) p 19: "Regulation FD created more problems than it solved. Perversely, this simultaneous disclosure requirement served to devalue research."

271 Weild D, Kim E, Newport L (2013) p 9.

272 *Ibid.*, p 10.

273 Section 401 of the JOBS Act added Section 3(b)(2) to the Securities Act of 1933. The SEC adopted the necessary rules in Regulation A+ that expanded the earlier Regulation A.

transactions[274] and permitted equity crowdfunding[275] subject to many constraints.[276] As regards publicly-traded companies, Title I of the JOBS Act exempted "emerging growth companies"[277] from certain disclosure duties and other obligations. In 2018, some securities-related and investment company related requirements were amended by the Economic Growth, Regulatory Relief, and Consumer Protection Act.[278] In July 2018, the U.S. House of Representatives passed a package of bipartisan financial reform legislation titled the "JOBS and Investor Confidence Act of 2018", also known as JOBS Act 3.0. The proposed legislation would have relaxed several requirements for small companies but was not approved by the Senate.

Eighth, some reforms have changed the structure of the banking industry. In the 1930s, the US introduced regulation by prohibition (the Glass-Steagall Act) and regulation by information (the Securities Act of 1933) as the two main procedures to restore economic vitality and public support for the capital-raising mechanism.[279] Glass-Steagall (the Banking Act of 1933) separated traditional commercial banking from investment banking. Glass-Steagall was repealed in 1999 under president Clinton, increasing the size of US banks and making them more competitive in US and global markets.

Ninth, the financial crisis of 2007–2009 led to the adoption of the Dodd-Frank Act of 2010. The purpose of the Dodd-Frank Act was to improve financial stability and consumer protection. The Dodd-Frank Act is a complex piece of regulation that increased the costs of regulatory compliance for banks. The Dodd-

274 Section 302 of the JOBS Act added Section 4(a)(6) to the Securities Act of 1933.
275 The Regulation Crowdfunding adopting release is SEC Release No. 33–9974 (Oct. 30, 2015).
276 See Heminway JM (2017).
277 Section 101(a) of the JOBS Act added Section 2(a)(19) to the Securities Act of 1933 as follows: "(19) The term 'emerging growth company' means an issuer that had total annual gross revenues of less than $1,000,000,000 …" Section 101(b) of the JOBS Act added a similar Section 3(a)(80) to the Securities Exchange Act of 1934. The thresholds are indexed for inflation.
278 Title V of the Economic Growth, Regulatory Relief, and Consumer Protection Act of 2018. See Section 501 (amending the Securities Act of 1933 to exempt from state registration securities qualified for national trading by the Securities and Exchange Commission (SEC) and authorized to be listed on a national securities exchange) and Section 504 (amending the Investment Company Act of 1940 to exempt from the definition of an "investment company", for purposes of specified limitations applicable to such a company under the Act, a qualifying venture capital fund that has no more than 250 investors).
279 Auerbach J, Hayes SL (1986) p 34.

Frank Act includes the Volcker rule, that is, a ban on proprietary trading by big banks.[280]

The Obama Administration expanded the role of federal law in the regulation of financial markets with regulations based on the Dodd-Frank Act.[281] For example, consumers were to be protected by the new Consumer Financial Protection Bureau.[282]

Ultimately, the regulatory burden was perceived as too high.[283] The 2017 Joint Economic Report recommended turning back regulation and reducing the government's micromanagement of private financial intermediation.[284]

In February 2017, president Trump called for a regulatory break for US banks. An executive order[285] laid down the following policy principles: "(a) empower Americans to make independent financial decisions and informed choices in the marketplace, save for retirement, and build individual wealth; (b) prevent taxpayer-funded bailouts; (c) foster economic growth and vibrant financial markets through more rigorous regulatory impact analysis that addresses systemic risk and market failures, such as moral hazard and information asymmetry; (d) enable American companies to be competitive with foreign firms in domestic and foreign markets; (e) advance American interests in international financial regulatory negotiations and meetings; (f) make regulation efficient, effective, and appropriately tailored; and (g) restore public accountability within Federal financial regulatory agencies and rationalize the Federal financial regulatory framework."[286]

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280 Section 619 of the Dodd-Frank Act added a new section 13 to the Bank Holding Company Act of 1956. Section 13 of the BHC Act generally prohibits banking entities from engaging as principal in proprietary trading for the purpose of selling financial instruments in the near term or otherwise with the intent to resell in order to profit from short-term price movements. For the background of the BHC Act, see Release No. BHCA-1 (December 10, 2013) (Prohibitions and Restrictions on Proprietary Trading and Certain Interests In, and Relationships With, Hedge Funds and Private Equity Funds), I.

281 Economic Report of the President Together with the Annual Report of the Council of Economic Advisers, January 2017, Chapter 6, pp 349–422.

282 *Ibid.*, pp 398–399.

283 The 2017 Joint Economic Report (115th Congress), Chapter 6, pp 122–137, at pp 133–137. The Economist, Rise of the No Men, 4 May 2019: "At the end of 2018, some 30,000 (or 15%) of the 204,000 employees of Citigroup, an American bank, worked in compliance, risk and other control functions ... At the end of 2008 it was just over 4% of employees."

284 The 2017 Joint Economic Report (115th Congress), Chapter 6, p 137.

285 Presidential Executive Order 13772 on Core Principles for Regulating the United States Financial System (February 03, 2017).

286 *Ibid.*, Section 1.

The order was not law.[287] In June 2017, it was followed by a US Department of the Treasury report containing recommendations designed to overhaul the regulatory regime.[288] Since Treasury is not a rule-writing regulator, the report could be seen as a wish list.[289]

In 2018, the key provisions of the Dodd-Frank Act were revised by the Economic Growth, Regulatory Relief, and Consumer Protection Act.

Tenth, the protection of small investors was improved by "Regulation Best Interest". Regulation Best Interest was proposed by the SEC in April 2018[290] and adopted in June 2019.[291]

The SEC found it appropriate to make enhancements to the obligations that apply when broker-dealers make recommendations to retail customers.[292] Regulation Best Interest requires brokers to act in the "best interests" of their clients when recommending investments. Moreover, broker-dealers must put in place rules to "mitigate" conflicts of interest created by financial incentives.[293]

The SEC received many comments on its proposal.[294] Some of them related to the fact that Regulation Best Interest does not contain any definition of "best interest". One may therefore ask how the "best interest" standard compares to a "fiduciary duty" standard.[295] The two standards are expected to be similar. The SEC wants to use "a principles-based approach to determining what is in the 'best interest' … similar to an investment adviser's fiduciary duty".[296] Commissioner Peirce said in a speech before the adoption of the final rule that "it is interesting to look at the proposed best interest standard alongside the Commission's proposed interpretation of an adviser's fiduciary duty to its clients. … Regulation Best Interest would subject broker-dealers to an even more stringent

287 See *ibid.*, Section 3.

288 U.S. Department of the Treasury (2017).

289 Ben McLannahan and Sam Fleming, US Treasury department seeks to revamp Obama-era regulations. Financial Times, 13 June 2017.

290 SEC Release No. 34 – 83062 (April 18, 2018) (proposed rule).

291 SEC Release No. 34 – 86031 (June 5, 2019) (Regulation Best Interest: The Broker-Dealer Standard of Conduct).

292 SEC Release No. 34 – 83062, p 8.

293 SEC Release No. 34 – 83062, p 9; SEC Release No. 34 – 86031 (Regulation Best Interest), p 5.

294 SEC Release No. 34 – 86031 (Regulation Best Interest), pp 24 – 27; Roper B (2018).

295 The U.S. Department of Labor's Fiduciary Rule sought to extend investment advisers' fiduciary duty to securities brokers when they provide incidental investment advice to their clients' retirement accounts. Chamber of Commerce v. Department of Labor, No. 17 – 10238 (5th Cir. 2018). See also Roper B (2018); Johnsen DB (2019).

296 SEC Release No. 34 – 83062, p 52; SEC Release No. 34 – 86031 (Regulation Best Interest), p 73.

standard than the fiduciary standard outlined in the Commission's proposed interpretation."[297] Moreover, the "best interest" standard is expected to add to the duty to consider the "suitability" of investments. The suitability rule requires securities brokers to be reasonably informed of their clients' financial circumstances and to have a reasonable basis to believe the recommendations given by them are suitable.[298]

Conclusions. A fundamental reform of securities law does not seem to be high on the agenda in the US. There is no general reform plan. After the turn of the millennium, the Enron scandal gave rise to the Sarbanes-Oxley Act of 2002. The financial crisis of 2007–2009 led to the Dodd-Frank Act of 2010. The JOBS Act of 2012 made it easier for smaller companies to issue shares to the public and permitted equity crowdfunding.

Interestingly, the fundamental principles of securities regulation were discussed by several law professors at the turn of the millennium before other things – regulating corporate governance and preventing runs on banks – prevailed in the political and regulatory discourse. We can build on the earlier discourse in Chapter 6 in which we will propose design principles for the future.

4.6 Conclusions

It would be difficult to identify universal design principles in the history of securities law. It is easier to identify stated and normative objectives. However, such objectives depend on many things and can vary depending on the country or legal system and the point in time.

The stated and normative objectives of securities law were first influenced by the scope of company law. At the turn of the twentieth century, abuses relating to the issuing of shares were addressed in German company law, starting with the company law reform (Aktienrechtsnovelle) of 1884. In the US, the Securities Acts were adopted in the public interest after the Wall Street Crash of 1929. They were designed to protect investors and make the business of dishonest issuers more difficult by requiring disclosures and laying down civil liability for issuers and non-issuers.

297 Peirce HM (2018).

298 See Nichols FH (1977); Johnsen DB (2019) pp 697–699 and p 735: "In a very real sense, the suitability rule for retail brokers has long been in competition with the fiduciary duty of investment advisers. It must be true, all things considered (including the costs of transacting), that the marginal investor is indifferent between these alternatives."

Securities law can now have several potentially conflicting normative objectives. For example, in the Securities Acts Amendments of 1975, Congress distinguished between overall goals and specific objectives. The overall goal was what is "in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets". There were five specific objectives that may be "difficult to reconcile".[299] EU securities law has many goals. They are influenced by the overall goals of the EU. Again, they may be difficult to reconcile.

Where securities law has many potentially conflicting stated and normative objectives, one may ask what objectives will prevail. Market integration and industrial policy have played a major role. They have required mandatory provisions of law rather than a laissez-faire or contract-based approach. In the US, securities law created a national stock market. US securities law is regarded as particularly investor-friendly. It has contributed to financialisation, the growth of financial intermediaries, and concentration in the financial sector. In EU securities law, both market integration and industrial policy have played a prominent role. In its recent CMU action plan,[300] the European Commission seems to be focusing on how to open up national markets for international financial intermediaries in order to increase the size of markets and create economies of scale. The Commission seems to think that markets should be integrated by making it possible for financial intermediaries to offer their products to retail investors and SMEs in all Member States.[301]

The existence of many potentially conflicting stated and normative objectives also means that "economic efficiency" is not the number one design principle for securities law. Economic efficiency depends on how you prefer to define

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299 SEC Release No. 34–61358 (Jan. 14, 2010) (Concept Release on Equity Market Structure), p 11.

300 Action Plan on Building a Capital Markets Union, Communication from the Commission, COM(2015) 468 final.

301 See, for example, *ibid.*, Introduction: "[M]ore cross-border risk-sharing, deeper and more liquid markets and diversified sources of funding will deepen financial integration, lower costs and increase European competitiveness." *Ibid.*, section 6.4: "For EU capital markets to thrive, they will need to be open and globally competitive, and able to attract additional equity and debt investment from international investors. CMU will help to make EU capital markets more attractive to international investors by eliminating legal and administrative cost to cross-border operations, and enhancing convergence of supervisory outcomes across Europe." The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final, section 1.2.1: "In spite of the financial crisis, the integration of capital markets in Europe has increased over the last 25 years. Capital markets have expanded substantially since 1992 to more than twice the size of the Union economy in 2015. More and more financial service providers are able to offer their services across the Union thanks to a single passport."

economic efficiency and the factors that you want to take into account in your calculations. In other words, what is alleged to be "efficient" in the economic sense can be the result of value-based choices and a simplistic view on society.[302] For example, since the interpretation of EU securities law is a holistic exercise, the mere fact that "effectiveness" often is cited as one of the regulatory objectives of EU capital market law says very little about what should be relevant in the complex process of interpretation.[303] In this respect, there is no difference between EU securities law and market regulation in general. One should avoid referring to vague and subjective notions such as "economic considerations" and "market efficiency" as a guideline for policy and the interpretation of securities law. They are just a way to hide political preferences and subjective economic interests under the shroud of rhetoric.[304]

Company law and securities law complement each other. Where they have different aims,[305] the reaching of those aims can be hampered. This problem could be addressed by choosing a primary aim common to both. In practice, one of the unwritten but common aims that the financial industry has lobbied for has been to foster the interests of financial intermediaries as shareholders, investors, traders, and providers of financial services. Fostering the interests of non-financial issuer-firms has not belonged to the primary aims of securities

302 See, for example, Holmström B, Milgrom P (1987) pp 303 – 304; Simon HA (1991) p 30; Mäntysaari P (2017) section 6.3.4.

303 For interpretation as an exercise in rhetoric, see, for example, Mäntysaari P (2017). See nevertheless Kalss S (2017) pp 504 – 505 paragraph 37 on the "importance of efficiency as a guideline for the interpretation of capital market law". Kalls cites Möllers TMJ (2008).

304 See, in contrast, Kalss S (2017) p 490 number 1: "[C]apital market law is an area of law that opens up economic arrangements in a very specific manner, because the provisions of capital market law are regularly underpinned by economic considerations. Capital market law is faced with particular challenges arising from the information asymmetry between the different parties on the market as well as from the conflicts of interest of the financial service providers (banks). These aspects of assessment therefore play an important role in the interpretation of the individual provisions." *Ibid.*, pp 504 – 505 paragraph 37: "Capital market law is an area that is open to economic considerations in a special way. The reason for this is that effectiveness is cited as a regulatory objective at several points in the provisions. The functioning of capital market law is one of the traditional objectives of every provision of capital market law at the European level. The regulatory objective of market efficiency can be found almost routinely in the recitals to the relevant guidelines and regulations … Capital market law is based on the hypothesis of market efficiency, whose central cornerstone is information efficiency. The interpretation of provisions of capital market law must therefore be focused on securing this information efficiency and safeguarding the functioning of the market. Civil, public and criminal legal consequences must be judged and assessed using economic rules."

305 Veil R (2017) § 6 paragraph 15.

law in the US and the EU. This may have reduced the number of companies with publicly-traded shares. What one can learn is that it would be necessary to choose new common aims for company law, securities law, and exchange law (section 6.1). One of them should be fostering the interests of non-financial issuer-firms. After all, there are neither public stock markets nor investors on such markets without issuer-firms that prefer to go and stay public.

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5 Recent Market Practices

5.1 General Remarks

State regulation is complemented by market practices. State regulation facilitates market structures and transactions by laying down "the rules of the game", but the game actually played is defined by market practices as well. Market practices have belonged to the core drivers of the development of commercial law in the past.[1]

In this Chapter, we can have a brief look at some of the recent market practices, namely practices contributing to the lack of companies with publicly-traded shares (section 5.2), the practices of angel investors, venture capital firms, and investment funds (section 5.3), practices relating to the organisation of SME exchanges (section 5.4), the use of private listings and SPACs (section 5.5), the new role of social media in the GameStop case (section 5.6), and practices relating to the structure and composition of the board (section 5.7). We will use historical and recent practices as inspiration for future regulation in the second part of this book (Chapter 6).

The market practices of firms can be the result of many things. In the stock market, they reflect the interests of firms, the quality of shareholders as providers of funding and ancillary services, the quality of exchanges as providers of trading opportunities and ancillary services, and other things. From the perspective of the firm, the firm can be regarded as the principal of the principal-agent theory, and other parties can be regarded as the firm's agents (sections 2.3.3, 2.4.16 and 2.5).

5.2 Lack of Companies with Publicly-Traded Shares

A stock exchange listing is assumed to bring many benefits to public companies. For example, a SEC registration is said to allow public companies "to issue more shares, to issue public debt under favorable conditions, and to use their equity as

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1 See, for example, Goode RM (1998) p 38: "It is through the rules and practices of the organised market, and from the market's power and competitive thrust, that the fullest play can be given to the creative genius of the merchant and his lawyer. The rules and usages of the market bind the participants to common standards and practices. They bolt a mass of bilateral contracts onto a framework of standard terms, each participant undertaking to the others to observe the rules of the market."

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a form of currency to make acquisitions. It allows insiders to reduce their stakes and to diversify their holdings."[2]

However, there are relatively few listed companies in the world (section 1.3). Firms prefer to remain private, go private, or merge for many reasons.[3] A growth firm and its founders may benefit more from avoiding public markets. Interesting growth firms can raise enough capital through private placements, do not want public debt, can use their equity as a form of currency to employ key people and to make acquisitions, and can choose better ways than an IPO for insiders to exit the company. The fact that big firms have a competitive advantage makes it rational for small firms to create greater operating profits by selling out in a trade sale.[4] Moreover, listed companies can be taken over.[5]

There have been many attempts to build theories to describe the phenomenon of low IPO levels.[6] The decline of IPOs seems to be the result of powerful market forces.[7] We can have a brief look at some of the factors that have contributed to low IPO levels. They include the predominance of small firms, the competitive advantage of private firms, the increasing weight of intangible assets, the equity funding practices of start-ups, the easier availability of private capital, the useful services of venture capitalists, high valuations achieved in trade sales and private equity transactions, the high costs of IPOs and regulatory compliance,

2 Doidge C, Kahle KM, Karolyi GA (2018) p 14.

3 See Special Study of Securities Markets (1963a) pp 491–492; Jensen MC (1989); Gao X, Ritter JR, Zhu Z (2013); Hanley KW (2018); Díez FJ, Leigh D, Tambunlertchai S (2018); Kahle KM, Stulz RM (2017); Doidge C, Kahle KM, Karolyi GA (2018); Ewens M, Farre-Mensa J (2020); FESE (2019) p 5; Nicole Bullock, The reasons for a stagnating US public equity listings market. Financial Times, 17 May 2017.

4 Gao X, Ritter JR, Zhu Z (2013); Díez FJ, Leigh D, Tambunlertchai S (2018).

5 Reddy B (2020): "[I]t does not appear that the UK public equity markets are providing a stable, long-term home for UK tech-companies."

6 Rose P, Solomon SD (2016) p 83: "The most prominent theory offered for the drop in small company IPOs, a regulatory theory, posits that the drop is related to federal regulatory choices, including the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley). Other theories offer differing or complementary explanations. A theory, often paired with the regulatory theory, posits that heightened regulatory enforcement via public and private litigation has stunted the small IPO market. Market structure theories build on the regulatory explanation to assert that subsequent shifts in market structure have set up economic barriers to small company IPOs. Finally, economic scope theory posits that the cause of the small IPO's demise is neither related to regulation nor the structure of our capital markets, but rather due to shifting economic conditions that have provided alternative outlets for small IPOs."

7 See *ibid*.

and the low quality of shareholders in public markets. The list is not exhaustive. Other reasons range from the lack of analyst coverage to unfavourable tax laws.[8]

Small private firms. Most firms in the world are small entrepreneurial or family businesses. Family businesses made up more than 60 % of all European companies according to a 2009 study.[9] Relatively few companies in the world can fulfil the requirements for admission to trading on a traditional stock exchange. Traditional listing rules are designed for large established limited-liability companies with a dispersed share ownership structure.

The competitive advantage of private firms. The current regulatory framework for companies with publicly-traded shares does not seem to increase their competitiveness against private firms.[10]

A stock exchange listing does not seem to reduce funding costs. As regards the financing of young firms, private markets are much more important than public markets.[11] Generally, firms rarely use public equity markets in order to raise cash.[12]

Moreover, the current legal framework for listed companies hampers management discretion especially when it reflects the financial business model and shareholder primacy (section 2.4.13). One may note that self-imposed unilateral constraints increase the likelihood of defeat according to Carl von Clausewitz, a nineteenth-century Prussian general.[13]

Private firms thus have access to funding without the obligations of public firms and may make investments according to what makes business sense for the firm, whereas public firms have more obligations and are expected to distribute funds to market investors.[14]

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8 See Rose P, Solomon SD (2016) p 91 on the impact of Regulation FD on analyst coverage. See also FESE (2019) p 5: "Why is this happening? The reasons are manifold, and it will take a holistic, coherent and well-coordinated policy effort" [in the EU's CMU to address them].

9 European Commission (2009).

10 Jensen MC (1989).

11 Doidge C, Kahle KM, Karolyi GA (2018).

12 Mayer C (1990).

13 von Clausewitz C (1832).

14 See also de Fontenay E (2017) p 448: "From their inception, the federal securities laws proposed a simple bargain to U.S. companies: disclosure in exchange for investors. Companies that went public took on the obligation of publicly disclosing substantial amounts of information and, in return, were permitted to solicit the largest (and therefore cheapest) source of capital: the general public. Conversely, private companies were restricted to raising capital primarily from insiders and financial institutions, without publicity and subject to severe limitations on subsequent transfers of their securities – effectively precluding any sort of market for private company equity ... Over the last three decades, the disclosure bargain has largely been revoked.

Small-cap companies generally do not seem to benefit from a stock exchange listing as much as large-cap companies do. Rose and Solomon have pointed out that "small-cap companies are different than large-cap companies. They have a shorter life span, are more likely to be involuntarily delisted, and are usually delisted for different reasons than the larger companies. More interestingly, the small-cap companies that stay listed tended to remain small."[15]

Intangible assets and the funding practices of technology start-ups. Growth firms can stay private longer because of new funding practices. On one hand, many start-ups may need less funding than in the past. On the other, technology start-ups may need more funding and have recently been able to raise larger amounts as seed funding.

Start-ups may need less funding because of technological advancement. Coyle and Green sum it up as follows: "[A] confluence of developments in technology – including cloud-based servers, cloud-based software, and open-source code – substantially reduced the costs of launching a technology-based start-up, beginning in approximately 2005. At the same time, a number of other factors – including the improved accessibility of high-speed Internet and the increased popularity of social media – enabled these same companies to rapidly achieve significant scale."[16]

Moreover, start-ups may need less funding because of the increasing weight of intangible assets: "[I]ntangible assets, and in particular human capital, often are a significant driver of long-term value in today's global economy. In 1988, the largest 500 U.S. companies had a ratio of intangible assets to market capitalization of 8.5 percent—that ratio was 29.7 percent in 2018."[17] The increasing weight of intangible assets is connected to the increasing scalability of business in digital economy. Intangible assets are scalable in a way that tangible assets are not.[18]

This said, some start-ups may need more funding. The race to grow and create positive network effects has increased the amounts of funding that a technology start-up may have to raise in order to survive in the platform economy. More-

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By repeatedly loosening the restrictions on capital raising and trading on the private side, securities regulators have given birth to a contradiction in terms: private securities markets. Today, private companies can raise ample, cheap capital with relative ease. Public company issuers therefore benefit significantly less from their disclosure obligations and can justifiably complain of a regulatory bait-and-switch."

15 Rose P, Solomon SD (2016) p 120.

16 Coyle JF, Green JM (2014) p 157.

17 Clayton J (2019).

18 Doidge C, Kahle KM, Karolyi GA (2018) p 15.

over, SMEs may need more equity funding. While intangible assets make up an increasing share of SMEs' assets generally, their value is difficult to assess. For this and other reasons, it can be difficult for SMEs to raise debt.[19]

Technology start-ups nowadays try to raise more seed funding as was described by Coyle and Green: "[I]t now makes great economic sense, from a founder's perspective, to raise a more substantial seed round than was previously the case because of how much more the founder can achieve with those amounts and how it better positions the company for a subsequent round of financing."[20]

Availability of private capital. There is plenty of private capital looking for companies to invest in. Growing technology companies seldom need an IPO to raise funding. For example, Blockchain, the developer of Bitcoin, raised traditional venture capital funding.[21] It chose neither an IPO nor an ICO to raise funding.[22] Because of venture capital, firms do not have to turn to market investors and companies can stay private longer.[23]

In the US, there is a contrast between the over-regulation of public offerings and the deregulation of private offerings.[24] Regulatory changes have made it possible for venture capitalists to raise large amounts of money from investors. A series of legal and regulatory changes beginning in the 1970s "gradually allowed pension funds to invest in stocks and higher-risk financial instruments ... and created a large market for unregulated investment instruments".[25] The National Securities Markets Improvement Act (NSMIA) of 1996 made it easier to set up large pools of private investors by increasing the scope of the federal regulatory regime (section 4.5).[26]

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19 See OECD (2019a).

20 Coyle JF, Green JM (2014) pp 158–159.

21 Blockchain Luxembourg S.A. website on 31 July 2019: "Backed by the Best – We've raised $70M from the leading investors in Silicon Valley, Wall Street, and London."

22 For the perceived benefits of ICO funding for a blockchain startup (other than Blockchain Luxembourg S.A.), see OECD (2019b) and Boreiko D, Ferrarini G, Giuduci P (2019) p 673.

23 See, for example, Salmon F (2014).

24 See de Fontenay E (2017).

25 Lafer G (2017) p 18. Citing Appelbaum E, Batt R (2014) pp 27–29.

26 Section 102(a) of the National Securities Markets Improvement Act of 1996, amending section 18 of the Securities Act of 1933. Ewens M, Farre-Mensa J (2020): "Among the 'covered securities' that NSMIA exempts from complying with state blue sky laws are those sold under Rule 506 of Regulation D, which allows private issuers to raise unlimited amounts of capital as long as all investors are 'accredited investors.' ... Rule 506 is the most popular exemption used by VC-backed startups to avoid SEC registration."

While most young firms seeking $150 million or more in the 1990s had to raise funding through IPOs, such sums could after the regulatory changes be raised privately. Changes in the scope of the federal regulatory regime resulted in a large increase in venture capital business[27] and kept successful firms private: "The new equilibrium in the entrepreneurial finance market implies that an increasing number of the largest and most successful firms in the U.S. economy are private and so avoid much of the scrutiny and governance regulation imposed on their public peers ... It also implies that ordinary stock-market investors—particularly those that invest via index funds—do not hold in their portfolios an increasing number of the fastest growing firms ..."[28]

The ancillary services of venture capitalists. Venture capitalists can provide more than just cash. From the perspective of the firm, they provide important ancillary services such as know-how, access to technology or markets, management services, and signalling services.

Venture capitalists can be specialist firms (managers of other people's money) or divisions of non-financial firms (corporate venture capital).[29] Corporate venture capital can enable a large non-financial firm to protect and build its main business.[30] Through corporate venture capital, it can track competing technologies, ensure that no competitors with disruptive technologies will emerge, invest in research and development, or spend assets that it otherwise would need to distribute to shareholders.[31]

27 Ewens M, Farre-Mensa J (2020); The Economist, Buttonwood: A private function, 29 September 2018; Doidge C, Kahle KM, Karolyi GA (2018) p 14: "It is often argued that firms do not want to be public because of regulations such as the Sarbanes-Oxley Act of 2002, Regulation Fair Disclosure (Reg FD), and other restrictions imposed on firms and the financial services community in the early 2000s. The biggest problem with this argument is that the peak for listings was in 1997, well before Sarbanes-Oxley and these other major regulatory events. If any regulatory actions played a role in the decrease in listings in the 1990s, it was the deregulatory action that increased the number of investors beyond which a firm has to register its securities. In other words, this deregulation made it easier for firms to raise funds while staying private. Further deregulatory actions took place after the 1990s."

28 Ewens M, Farre-Mensa J (2020).

29 Gilson RJ (2003); Colombo MG, Cumming DJ, Vismara S (2016).

30 The Economist, Corporate venture capital. If you can't beat them, buy them. Fear of being displaced by startups is turning firms into venture capitalists, 22 November 2014.

31 The Economist, Pharmaceutical M&A. Invent it, swap it or buy it. Why constant dealmaking among drugmakers is inevitable, 15 November 2014.

Higher valuations in trade sales. If a company has good prospects and its shareholders want to maximise share price in an exit, the shareholders will prefer a trade sale to an IPO. A trade sale brings a higher valuation. Most venture capital exits are sales to a larger company rather than IPOs.[32]

Generally, a large buyer in the same industry may be able to pay a higher price because of complementarities. Complementarities are more and more important in digital economy.[33] Since capital market investors cannot create complementarities, complementarities are not created in an IPO. With superior knowledge, trade sale buyers may also be able to assess the target firm's commercial potential better.[34]

The concentration of economy. The globalisation of business has increased the size of large firms. A larger firm can benefit from economies of scale in a global marketplace. Economy is increasingly concentrated.

At the same time, the profitability of small independent firms has declined relative to the value created as part of a larger organisation. A large diversified firm can quickly implement new technology and benefit from economies of scope.[35]

The mechanisms of digital economy have increased both venture capital investments and trade sale exits with large global firms as buyers. Large firm size is vital to create positive network effects in the-winner-takes-all markets.

In the exit and takeover market, the increased transparency of business in a global marketplace has given firms a better idea of where targets and buyers are. The growing minimum size of successful firms, improved access to targets and

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32 Ibrahim DM (2013) pp 257–259: "With IPOs now more scarce, the trade-sale exit (being acquired by a larger company in the same industry) becomes the start-up's most promising exit opportunity."

33 Doidge C, Kahle KM, Karolyi GA (2018) p 15: "Some financial economists also argue that economies of scope have become more important and that firms have a shorter window to take advantage of them because of the widening threat of greater competition. If this is true, firms may be better off being acquired by a larger firm rather than accessing the public markets to raise capital. The role of economies of scope is closely tied in to the importance of intangible capital. One key fact is that intangible assets are scalable in a way that tangible assets are not … [A] firm with a new software tool can increase its sales of that tool at a marginal cost that is close to zero. Hence, its main concern is to sell as much of that tool as possible until it is replaced by a better tool. Having access to a platform with broader visibility and distribution ability would be valuable to such a firm." See also Hanna Murphy, Window shopping to be core part of Instagram's future. Financial Times, 25 June 2019: "Some balked when Facebook paid $1bn for a 12-person lossmaking and revenue-free Instagram in 2012, but the app has proven a huge hit among younger users and could now be worth $158bn, according to analysts …

34 Salmon F (2014).

35 Gao X, Ritter JR, Zhu Z (2013).

buyers, and higher valuations in trade sale exits may reduce the number of listed firms.

Private equity. Mature companies have been taken over by private equity funds. Private equity funds can pay high prices because of financial engineering.

Because of the threat posed by private equity funds, listed companies have incentives to use various kinds of takeover defences.[36] They increase the cost of having shareholders. For example, listed companies need a more concentrated share ownership structure or a very large size, a high leverage, and a high share price. To achieve this, they may need to focus on the core business, divest assets to become asset-light, distribute assets to shareholders in the form of dividends and share buybacks, cut costs, increase debts, and grow through takeovers.[37]

The costs of IPOs and regulatory compliance. The overall costs of IPOs and regulatory compliance are high. Firms are more likely to choose an IPO where the benefits outweigh the costs and less likely to do so when the costs are perceived as too high.[38] The current regulation of stock exchanges and listed firms seems to have benefited stock exchange owners, traders, and institutional investors to the detriment of firms and the market.[39]

There seems to be a conflict between the high cost of regulatory compliance and the institutionalisation of equity investment. When equity investments are institutionalised and indirect, retail investors are not expected to trade directly and are protected in their dealings with financial intermediaries. Institutional and sophisticated investors that do trade directly need less protection because of their greater professionalism and diversified portfolios. Moreover, the risk exposure of fund management companies is limited since they obtain income from the fund. If the purpose of the regulation of IPOs and listed companies really were investor protection, the institutionalisation of equity investment could be

36 See Mäntysaari P (2010a) section 9.2.6, pp 217–220; Mäntysaari P (2010c) Chapter 18.

37 See also Michael Skapinger, Opinion Capitalism. The shareholder-first corporate model erodes public support. Financial Times, 6 March 2017. The Economist, Bad recipe, 2 March 2019: "... Kraft Heinz is a super-sized version of the strategy of much of corporate America over the past decade. Although sales have been sluggish, 66% of firms in the S&P 500 index have raised their margins and 68% have raised their leverage since 2008. A mania for deals in mature industries, premised on debt and austerity, is in full swing." See nevertheless Asness C, Hazelkorn T, Richardson S (2018) on the benefits of buybacks and buyback myths.

38 Nicole Bullock, The reasons for a stagnating US public equity listings market. Financial Times, 17 May 2017.

39 See also Macey JR, O'Hara M (2005) pp 581–582: "... rules that benefit the exchange as a firm may well be to the detriment of the market."

expected to have resulted in lower-cost regulatory compliance obligations.[40] Since this has not happened, the question is to what extent market regulation is over-regulation designed to benefit financial intermediaries at the cost of issuer-firms.

The quality of shareholders in public markets. Finally, shareholders in public markets may not be good enough. Shareholders can be a source of funding but are always providers of ancillary services. The services of institutional investors that dominate public markets may be of low quality or too costly for small-cap issuers. Many institutional investors such as private equity funds or hedge funds look for short-term benefits. Many are not interested in small-cap or mid-cap issuers in the first place. The trend of passive investing favours large-cap stocks. Low-cost index funds tend to track big companies with liquid shares rather than small companies with inherently illiquid shares. This makes small-cap stocks less interesting even for the remaining active investors in public markets.[41]

Conclusion. There is a long list of reasons that may have contributed to low IPO levels. Firms remain or go private for a combination of reasons that create a powerful market trend against IPOs.

Radical innovation is needed to increase the number of companies with publicly-traded shares and retail investors' direct share ownership. Innovation in company and securities law is not enough but needs to be complemented by "structural changes that focus more on the overall market environment for smaller companies. Put another way, the primary issue is not how to get companies to market, which may merely create a false supply, but how to create a regulatory and market environment that fosters growth in small companies."[42]

40 Armour J, Bengtzen M, Enriques L (2018) p 400: "This implies that the quality of the legal regime under which issuers operate becomes less important, as institutions are better able to do their own due diligence and insist on appropriate protections."

41 See even The Economist, Privacy and its limits, 1 February 2020: "Right now almost everyone believes that private markets are better than public ones … Institutional investors are rushing headlong onto private markets, especially into venture capital, private equity and private debt."

42 Rose P, Solomon SD (2016) p 127.

5.3 Practices of Angel Investors, Venture Capital Firms and Investment Funds

5.3.1 General Remarks

IPO levels have been influenced by angel funding and venture capital practices. Angel funding and venture capital were to a large extent developed in California[43] and are closely connected to the unique culture of Silicon Valley.[44]

These forms of corporate finance used to lead to an IPO as the textbook model of exit and entrepreneurial success. But market practices have changed. Start-up funding practices now tend to lead to a trade sale rather than an IPO. For example, the IPO of Tesla Motors in 2010 still reflected the traditional Silicon Valley model. In August 2018, Elon Musk regretted Tesla's IPO and unsuccessfully proposed taking the company private. But Tesla remained a public company. Tesla and many other public tech companies reached very high market valuations in 2020.[45] The scarcity of tech company stocks and very high valuations increased tech company IPOs in 2020.[46]

There are different forms of funding for different stages in the life of the firm. Investors are specialised. It is therefore necessary to address transition from one form of funding to the next (section 5.3.3). Moreover, the governance of many start-ups or growth firms is adapted to the preferences and practices of venture capital firms and angel investors (section 5.3.4). The governance of start-ups or growth firms is a particular form of the corporate governance of closely-held companies that generally has been "neglected for far too long" in corporate governance research.[47] As regards the role of fund investors, venture capital firms

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43 Gompers PA, Lerner J (2001) p 149: "When venture capital disbursements are divided by industry, about 60 percent in 1999 went to information technology industries, especially communications and networking, software, and information services … When venture capital disbursements are viewed geographically, a little more than one-third of venture capital went to California. A little less than one-third went to Massachusetts, Texas, New York, New Jersey, Colorado, Pennsylvania, and Illinois, combined."

44 See Lee CM, Miller WF, Hancock MG, Rowen HS (eds) (2000); Suchman MC, Cahill ML (1996); Coyle JF, Green JM (2017).

45 See Richard Waters, Patrick McGee, Hannah Murphy, Big Tech defies global economic fallout with blockbuster earnings. Financial Times, 31 July 2020; Michael Mackenzie, Why big tech stocks can weather the storm. Financial Times, 12 September 2020; Richard Henderson, Eric Platt, Tesla reversal tests faith in Elon Musk's 'business miracle'. Financial Times, 11 September 2020.

46 See The Economist, Partying like it's 1999, 22 August 2020.

47 Fleischer H (2018e) p 680.

apply the same basic practices as the operators of investment funds in general. There is separation of capital investment, share ownership, and control. Fund investors have no rights in portfolio companies and their control rights are very limited in the fund (section 5.3.2).

5.3.2 Separation of Capital Investment and Control

The practice of investment funds such as hedge funds, private equity funds, or venture capital funds builds on the separation of capital investment, corporate share ownership, and control.[48] Fund investors generally are even more passive than the passive shareholders of publicly-traded companies.[49]

A fund investor owns shares in an investment fund. A fund investor does not become shareholder in the management company of the fund or any of the companies in the fund's portfolio. Fund investors therefore have no role to play in the governance of the management company and portfolio companies.[50] Moreover, their control rights tend to be radically limited in the fund. The default rule is that the fund management company is neither shareholder in a portfolio company nor a fund investor. Sometimes the management company or its executives do invest in the fund or portfolio companies, but in practice the management company can control one or more funds and use voice in the funds' portfolio companies without any capital investment. One can therefore say that market investors that choose indirect equity investments by putting their money in funds waive all their control rights in portfolio companies. If a fund exercises control in a portfolio company, its powers can be used by the representatives of the fund's management company or by an external service provider.

Venture capital has its own particular characteristics. In traditional venture capital practice, power in a portfolio company is allocated to company founders and managers of venture capital. In effect, this practice means two things in relation to the separation of powers. In a way, it means a return to practices that

48 Gilson RJ (2003) on venture capital. Morley J (2014) and Ferrell A, Morley JD (2018) on investment funds.

49 See Ferrell A, Morley JD (2018) p 333 on mutual fund shareholders in particular: "Mutual fund shareholders thus exhibit an extreme of passivity that exceeds even the much discussed passivity of ordinary public company investors. In an ordinary public company, small and unsophisticated investors tend to find it rational not to vote. But in a mutual fund, even the large and sophisticated investors will fail to vote, because they will always find it easier instead to redeem."

50 See Morley J (2014) p 1241.

preceded the separation of powers and the shielding of management against shareholders (section 2.4.2). Moreover, it means that the representatives of the venture capital firm can have control rights in the portfolio company without a corresponding equity investment.

This practice may benefit the start-up or growth firm. On one hand, the survival of a start-up or growth firm depends on the quality of its founders, managers, and employee shareholders. They can provide important services as shareholders.[51] On the other, a successful growth firm customarily needs venture capital. In addition to access to equity capital from the fund that they manage, the managers of the venture capital firm (venture capitalists) can provide ancillary services that are regarded as important for the survival of the firm.

The allocation of control rights in the portfolio company to the venture capital firm or its managers can be explained by three things. The first relates to the function of venture capitalists as gate-keepers of funding and providers of ancillary services. The agreed governance model of the firm is designed to enable venture capitalists to provide those ancillary services. The second relates to the terms of the fund. The venture capital firm or its managers can ensure compliance with the terms of the fund by being in control of the portfolio company. The third relates to the bargaining power of venture capitalists. To understand the actual allocation of power, it is not enough to refer to the efficiency of control arrangements[52] or to uncertainty and information asymmetries between principals and agents.[53] Start-ups and growth firms often need venture capital and may have few alternatives.

A venture capital contract thus allocates power to venture capitalists. In the portfolio company, this is achieved by the staging of funding, board representation, negative covenants, and provisions on exit.

It has been said that "[t]he venture capital fund-portfolio company contract stands the Berle-Means problem on its head. Instead of investors having disproportionately more equity than control as in public corporations, the venture capital fund has disproportionately more control than equity."[54]

This is not the whole picture. Since the contractual framework allocates power in particular to the general partner or managers of the venture capital

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51 See, for example, Gilson RJ (2003) p 1083; Hill J (2021) section 2.1 p 20.

52 See Morley J (2014) on the efficiency of control in investment funds.

53 Sahlman WA (1990) p 473: "The venture-capital industry has evolved operating procedures and contracting practises that are well adapted to environments characterized by uncertainty and information asymmetries between principals and agents."

54 Gilson RJ (2003) pp 1081–1082.

fund,[55] fund investors are effectively excluded from the governance of portfolio companies and fund managers have much more control than equity. Since fund managers use the fund as leverage, they can exercise control without equity in portfolio companies.

Many large and small financial investors have traded their control rights for exit rights in highly popular investment fund practice. This can make sense for both investors and portfolio companies since shareholders generally have not provided good control services in the past (section 2.4.5) and specialised professionals can provide better services.[56]

5.3.3 Different Investors for Different Stages of Development

There are different forms of funding for different stages of development. Investors are specialised. For this reason, it is necessary to address transition from one form of funding to the next.

Specialised investors. The funding of new growth companies has been the business of specialised investors. They are "specialised by stage of development (i. e. start-up, product development, revenue generation, or profitability stage) or by round (i. e. seed, first, second, or later round)".[57]

Angel investors[58] and crowd investors[59] can be sources of seed funding. Funding needs tend to increase as the firm grows. The later the round, the greater the funding invested in a round. Venture capital is for later funding rounds when the firm has larger funding needs. Venture capital traditionally has not been available for seed funding. For example, the first Vision Fund that made big

55 *Ibid.*, p 1071: "The general partner (GP) puts up only one percent of the capital, but receives essentially complete control over all of it. The particular terms of the fund's governance are set out in the limited partnership agreement."

56 Morley J (2014) pp 1245 and 1248: "[M]ost fund investors have unusually strong exit rights and most fund managers have unusually strong performance incentives. Both of these features take the place of control, and as a consequence control over management companies resides more efficiently in the hands of management company investors than in the hands of fund investors. Fund investors thus benefit from the limits on control, because the placement of control in the hands of its most efficient users allows investment funds to offer lower fees and better returns … As a result of exit and withdrawal rights in investment funds, fund investors value control rights less than ordinary company investors do. Fund investors do not value control, because if they are unhappy, they can simply remove their money and take it elsewhere."

57 OECD (2015c) p 110.

58 Ibrahim DM (2008); Wong A, Bhatia M, Freeman Z (2009).

59 OECD (2015c) p 82.

bets needed to invest at least $100 million per deal as part of an agreement with its investors.[60]

The role played by these specialised investors in the US has been summed up as follows: "The conventional wisdom is that entrepreneurs seek financing for their high-growth, high-risk start-up companies in a particular order. They begin with friends, family, and 'bootstrapping' (e.g., credit card debt). Next they turn to angel investors, or accredited investors (and usually ex-entrepreneurs) who invest their own money in multiple, early-stage start-ups. Finally, after angel funds run dry, entrepreneurs seek funding from venture capitalists (VCs), whose deep pockets and connections lead the start-up to an initial public offering (IPO) or sale to a larger company in the same industry (trade sale)."[61]

Both in Europe and the US, the greatest portion of new growth company funding supports later stage ventures, "when companies are perceived to be partially de-risked and close to their revenue generation stage".[62] In contrast, seed and early stage financing play a bigger role for investors in Israel,[63] a country with a tight community and a very successful tech sector.[64]

Crowdfunding is a relatively new source of seed funding (Chapter 7). It promises more diverse funding options, allows new companies to grow at a quicker pace, and shortens the time between early funding stages.[65] It is customary to distinguish between five models of crowdfunding: donations-based, rewards-based, pre-selling or pre-ordering-based, lending-based (P2P), and equity-based crowdfunding.[66]

Of the five models of crowdfunding, only equity-based crowdfunding enables investors to participate in the company's long-term value creation.[67] However, the shares subscribed for at this stage tend to lack both underwriters and a secondary market.[68] Equity crowdfunding is also constrained by securities laws.[69] In the US, equity crowdfunding was not permitted until the Securities

60 Miles Kruppa, SoftBank's second Vision Fund speeds up pace of investment. Financial Times, 11 July 2021.

61 Ibrahim DM (2013) p 251.

62 OECD (2015c) p 113.

63 Ibid.

64 Senor D, Singer S (2011); Morrison & Foerster LLP (2017) p 6.

65 World Economic Forum (2015) p 18.

66 OECD (2015c) pp 82–82; UNDP (2018) p 113; UNDP (2017).

67 See Heminway JM (2017) pp 193–195.

68 See, for example, Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final.

69 See Heminway JM (2017) p 195: "Equity crowdfunding, as a financing method involving the offer and sale of securities, engages securities regulation. Specifically, in the United States,

Act of 1933 was amended by the JOBS Act of 2012.[70] Depending on the country, securities laws may restrict equity investments to professional investors.

Transition. Since the funding of start-ups and growth firms is staged, there must be a transition. If there are different kinds of investors for different stages of the firm's development, there is a transition from one source of funding to another. For example, there can be a transition from venture capital funding to public market funding, from angel funding to venture capital funding, or from crowdfunding to angel or venture capital funding.[71]

Later-stage investors have preferences relating to the management of risks, agency relationships, and information. Where later-stage funding is hampered by early-stage funding contracts, later-stage funding may not happen. Without later-stage funding, the business project will fail. This means that there are constraints on what early-stage investors can do.[72] Start-up and early-stage investors may need to align their preferences with the preferences of later-stage investors and ensure that there is contractual compatibility between their early-stage funding contracts and later-stage investors' contracts.

Moedl has therefore called for "a better understanding of contractual interdependencies between sequential financing sources"[73] and pointed out that the requirements of later-stage venture capital may dictate whether early-stage crowdfunding is suitable for start-ups.[74]

According to anecdotal evidence, access to later-stage funding is a bigger problem in Europe than in the US.[75]

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under the Securities Act of 1933, ... absent an exemption, an issuer must register the offer and sale of investment instruments categorized as securities."

70 See, for example, Williamson JJ (2013) p 2074.

71 See Wroldsen JS (2013) pp 615–616.

72 Moedl M (2019); Gilson RJ (2003); Heminway JM (2017) pp 209–211. Uncertainty, information asymmetry, and agency costs "inevitably bedevil early-stage, high-technology financing" according to Gilson.

73 Moedl M (2019) p 3 on the funding case of Smarchive.

74 *Ibid*., p 2.

75 Jonathan Guthrie, Opinion. Entrepreneurship. Why full 'network effect' evades Europe's start-ups. Financial Times, 23 March 2020: "In Europe, the historic problem has been that start-ups lack follow-on funding, let alone public market investors willing to bear years of losses as companies scale up."

5.3.4 The Preferences of Venture Capital Firms and Angel Investors

In closely-held companies, it is customary for shareholders to agree on voting rights, share transfer restrictions, exit rights, the composition of the board, and the remuneration of board members.[76] Angel investors and venture capital investors tend to have their own characteristic preferences.[77] There are large-scale studies on venture capital contract practices.[78] Generally, venture capital contracts shift risk from the investor to the entrepreneur.[79] Angel investment practices have gradually been influenced by venture capital practices.

In addition to capital (angel investors) or access to fund capital (managers of venture capital funds), angel investors and venture capitalists provide valuable ancillary services. For example, they may help to develop the idea, secure future financing, organise management, professionalise the firm, or bring the product to the market.[80] Moreover, the participation of angel investors and venture capital firms can signal the good quality of the investment.[81] The agreed terms of angel funding and venture capital funding reflect the ancillary services provided by angel investors and venture capitalists.

The preferences of venture capital investors. Venture capital investors can use various kinds of securities such as common stock, preferred stock, and convertible instruments.[82] In US venture capital practice, investors tend to require convertible preferred stock.[83] Venture capital is disbursed to the target company in stages over several investment rounds.[84]

76 Fleischer H (2018e) p 691.
77 For legal innovation in this context, see Coyle JF, Green JM (2014).
78 Kaplan SN, Strömberg P (2001); Kaplan SN, Strömberg P (2003); Kaplan SN, Strömberg P (2004); Denis DJ (2004); Da Rin M, Hellmann T, Puri M (2013); Gompers PA, Gornall W, Kaplan SN, Strebulaev IA (2016).
79 See Moedl M (2019) pp 7–8 summing up earlier large-scale studies.
80 See OECD (2015c) pp 110 and 119–120; Gilson RJ (2003); Ibrahim DM (2008) p 1411; Wong A, Bhatia M, Freeman Z (2009) p 228.
81 See, for example, Lee PM, Pollock TG, Jin K (2011).
82 See Coyle JF, Green JM (2014) pp 146–148: "In 1981, the Practicing Law Institute published a book entitled The Legal Aspects of Venture Capital Investing. This book listed a number of different types of securities that were widely used in venture finance, including (1) common stock, (2) convertible preferred stock, and (3) convertible notes or debentures." In Chinese venture capital practice, a functional alternative to convertible preferred stock is the valuation adjustment mechanism (VAM). See Lin L (2020).
83 Ibrahim DM (2008) p 1413; Coyle JF, Green JM (2014) pp 149–150; Ewens M, Gorbenko AS, Korteweg A (2019).
84 Gilson RJ (2003) p 1078; Ibrahim DM (2008) p 1413; Coyle JF, Green JM (2014) p 150.

The contractual and corporate framework is influenced by the large size of venture capital investments and the practices of fund management. Control rights depend on the size of the share block.[85] Venture capitalists prefer to control decision-making in portfolio companies by controlling the board.[86] The use of convertible instruments enables venture capitalists to reduce their risk exposure and benefit from an increase in the valuation of the company.[87] For the same reasons, venture capital contracts include negative covenants[88] and provisions on exit.[89] Venture capital contracts can provide for price-based anti-dilution protection, shares-based anti-dilution protection, tag-along rights (or co-sale rights), and pre-emptive rights.[90] The choice of the legal form of the portfolio company can depend on the interests of fund investors. In US venture capital practice, it is customary to choose between the LLC and the C Corp.[91]

When venture capitalists get convertible preferred stock, the valuation of the company plays a major role. A high valuation of the company at the time of investment means in practice that venture capitalists will have a right to convert their convertible securities into a large block of shares at the time of exit. Since the convertible securities are preferred, the company should even have a high valuation before common stockholders are paid in the event of liquidation. If the combined effect of the use of convertible preferred stock and a high valuation is in the interests of venture capitalists,[92] it could be a driver of higher valuations.

The preferences of angel investors at the end of the twentieth century. Angel investment is different. Angel investment practices have been influenced by the high-risk nature of start-up investments, the potential or anticipated availa-

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85 Ewens M, Gorbenko AS, Korteweg A (2019): “We find that contracts materially affect startup values, with both value-increasing and decreasing components. Fixing the quality of investor and entrepreneur, the average startup’s value increases with the investor’s equity share up to an ownership stake (upon conversion) of 15%.” For block-holding as a corporate governance tool, see Mäntysaari (2010a) sections 9.4.2 (controlling shareholders) and 9.5.5 (minority shareholders).

86 Gilson RJ (2003) pp 1081–1082; Ibrahim DM (2008) pp 1414–1415.

87 The Economist, Schumpeter. The entrepreneur’s new clothes, 28 September 2019: “Governance remains dull as ditchwater in Silicon Valley—until something goes wrong.”

88 Gilson RJ (2003) p 1082; Ibrahim DM (2008) p 1415.

89 Gilson RJ (2003) pp 1084 and 1091; Ibrahim DM (2008) p 1415.

90 See Wroldsen JS (2013) pp 615–622 and pp 629–631.

91 Fleischer V (2003–2004); Ibrahim DM (2013) pp 263–264. The C Corp is a business organised under Subchapter C of the Internal Revenue Code.

92 The Economist, Buttonwood. Stacked and whacked, 11 April 2020.

bility of venture capital in later funding rounds, and by technological advancement.

There is a high failure rate. An angel investor may invest in many start-ups, but "an angel investor's financial payoff comes from a small number of start-ups that go on to attract venture capital and then exit by an [IPO] or private sale".[93]

In the past, the high failure rate of angel investments and the relatively high cost of starting a business were reflected in the small size of angel investments. Each angel investor allocated relatively small amounts of funding to a relatively large number of start-ups. Coyle and Green have summed up the practices as follows: "Venture finance, as it was practiced in Silicon Valley and elsewhere at the turn of the last century, operated within a fairly stable legal framework. In a company's early days, friends, family, and angel investors would contribute relatively small amounts of capital to the venture in exchange for common stock. As the company grew, its founders would raise additional capital from VCs by issuing convertible preferred stock. In the event that future rounds of financing were required, the company would sometimes issue convertible notes to its existing investors in order to obtain enough capital to sustain it until the next preferred stock round of financing or a sale."[94]

The high failure rate and small size of investments as well as the anticipation of next funding rounds kept contract practices simple. It would have been too costly to "design, write, monitor, and enforce detailed contracts when smaller dollar amounts are invested".[95] For each high-net-worth individual providing angel funding, such a small investment was "not much more than a lottery ticket".[96]

It was, therefore, customary for angel investors to receive common stock. Angel investors did not stage investments.[97] Angel contracts customarily did not provide for any specific exit rights.[98] This simplified the legal framework and reduced legal fees.[99]

Neither did angel investors require board seats.[100] Instead, angel investors preferred "informal methods of screening and monitoring entrepreneurs".[101]

93 Ibrahim DM (2008) p 1408.
94 Coyle JF, Green JM (2014) pp 154–155.
95 Ibrahim DM (2008) p 1408.
96 See Coyle JF, Green JM (2014) pp 148 and 159.
97 Ibrahim DM (2008) pp 1422–1423; Coyle JF, Green JM (2014) pp 146–148.
98 Ibrahim DM (2008) pp 1422–1423.
99 Coyle JF, Green JM (2014) pp 147 and 159.
100 Ibrahim DM (2008) pp 1422–1423.
101 *Ibid.*, p 1408.

Generally, angel contracts left more discretion to founders. Angel investors used “more entrepreneur-friendly terms than do venture capitalists”. Angel investors customarily did not use restrictive contract terms such as negative covenants that allow investors to veto management decisions.[102] Such contract terms would have “reduce[d] their chances for a large upside by making follow-on venture capital funding unlikely”.[103] In other words, the lure of venture capital at a later stage weighed more than the high risk of early investment. Venture capitalists wanted to standardise their processes and keep negotiations uncomplicated. It was easy for them to turn down investment proposals in which angel investors already had taken their place.[104]

The preferences of angel investors in the twenty-first century. In the twenty-first century, the digital revolution made it easier to start a business: “In summary, a confluence of developments in technology – including cloud-based servers, cloud-based software, and open-source code – substantially reduced the costs of launching a technology-based start-up, beginning in approximately 2005. At the same time, a number of other factors—including the improved accessibility of high-speed Internet and the increased popularity of social media—enabled these same companies to rapidly achieve significant scale.”[105]

Technological advancement and the reduced costs of starting a business influenced the practices of angel investors. They increased the size of angel investments, changed contract practices, and influenced angel investors’ ancillary services.[106] An angel that makes a larger investment in a start-up has more powerful incentives to monitor the start-up.[107] Accelerator companies have emerged as early investors that provide intensive mentorship.[108]

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102 *Ibid.*, pp 1422–1423.

103 *Ibid.*, p 1408.

104 Ibrahim DM (2013) pp 255–256: “Because this negotiation and unwinding is costly and time-intensive, VCs considering numerous investment candidates may pass on these particular start-ups.”

105 Coyle JF, Green JM (2014) p 157. See also Ibrahim DM (2013) pp 251–252 and 256–257.

106 Ibrahim DM (2013) pp 251–252.

107 Coyle JF, Green JM (2014) p 159.

108 Hoffman DL, Radojevich-Kelley N (2012) p 58: “In exchange for funding, accelerator companies take a 5 percent to 6 percent equity stake of their participating boot-camp venture. Most of the accelerator companies state that they have no interest in controlling the nascent firm. Virtually all of the accelerators require a small portion of equity with an increased equity requirement for additional angel or VC rounds of funding … Accelerators provide value to their participants with early stage funding and, equally important, intensive mentorship. While the average start-up needs early stage funding, it is not a massive amount of capital …” Kenney M, Zysman J (2019): “Their goal was to assist in the growth of the entrepreneurs’ idea to the point that they

In recent US start-up funding practice, it has become more common for early-stage angel investors to purchase convertible notes.[109] This practice became popular after approximately 2005.[110]

Historically, the primary venture-finance purpose of the convertible note was to serve as a "bridge" between one round of venture financing and the next.[111] Coyle and Green describe the thinking behind convertible notes as follows: "Despite its debt-like features, such as interest rates, maturity dates, and security interests, bridge notes could also be thought of as a deferred equity investment because the bridge investors' expectations were not to have the principal repaid with interest, but to receive equity at some future date."[112]

In start-up financing, off-the-shelf bridge note documentation was used as a model in the seed context. Over time, this instrument was adapted to seed funding. For example, to simplify documentation, investors were promised a straightforward discount to the actual price in the next equity financing round. Security interests were deleted, because a seed-stage company customarily had no meaningful assets to serve as collateral.

These changes brought benefits to both investors and founders. First, should the start-up fail, the note was a debt instrument. In this case, the noteholder was protected better than a shareholder. Second, should the start-up succeed in attracting additional investment, the investor could convert the note into the same security that the first institutional VC investors would receive. Third, the simplicity of the instrument kept legal fees lower. Fourth, the parties could defer the valuation of the company to the later stage investor.[113]

There were some disadvantages. For the founder and the start-up, there was a risk of extend-or-pay claims. Where the note matures before a conversion event, the debt must be repaid unless the noteholder agrees to grant an extension. Since the start-up cannot repay the debt, the noteholder may force the founder and the company to grant better terms. For the noteholder, there are risks caused by the absence of a fiduciary duty. The investor is not a shareholder but is treated as a contract party. The terms of the contract, therefore, are the main source of protection to the noteholder.[114]

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could 'graduate' and form a proto-firm, able to raise money from angel groups or venture capitalists ..."

109 Green JM, Coyle JF (2016) p 171.

110 Coyle JF, Green JM (2014) p 148.

111 *Ibid.*, p 151.

112 *Ibid.*, p 153.

113 *Ibid.*, pp 161–162.

114 *Ibid.*, pp 162–163.

At the end of 2013, the Simple Agreement for Future Equity (SAFE) emerged as a new startup-financing tool. The SAFE was developed by Y Combinator as a means of investing in start-ups that expected to raise institutional venture capital at a later date. Y Combinator took the basic convertible note and stripped the debt attributes out of it. This made the SAFE a simple contractual derivative instrument. It is neither debt nor equity. It will prove valuable to the holder if, and only if, the company that issues it raises a subsequent round of financing, is sold, or goes public. 500 Startups, another leading entrepreneurship accelerator, developed the Keep It Simple Security (KISS). KISS is a short version of a convertible debt contract.[115]

Syndication. Venture capital investments tend to be much larger than angel investments. This is reflected in the use of a more detailed process and more detailed contracts in venture capital.[116]

The small size of each angel investment can lead to free-riding as angel investors seek to benefit from the work of other angel investors. Angel investors can share the work by syndication.[117] By syndicating investments, angel investors can screen and pool investments as a group. For example, there can be regional angel groups.[118] The greater size of pooled investments can influence contract terms as well.

In the US, Title II of the JOBS Act made it easier for accredited investors to invest in early-stage ventures through syndicates where lead investors bring deals to a crowd of backers.[119] Title II has been a success.[120]

Staging and participation in subsequent funding rounds. In economics, some goods are regarded as credence goods the quality of which cannot be verified ex ante.[121] There are similar issues in the funding of start-ups and growth firms.

To manage this problem, venture capital investors customarily use the staging of investments as a control mechanism:[122] "Instead of providing the entirety of capital in a lump sum, the investment is allocated by stages, preserving the investor's option to abandon."[123] Investors agree to put in more money provided

115 *Ibid.*, pp 168 – 171; Green JM, Coyle JF (2016) pp 171 – 172.
116 Ibrahim DM (2008) p 1408.
117 Wong A, Bhatia M, Freeman Z (2009) p 227.
118 Ibrahim DM (2008) p 1409.
119 Catalini C, Fazio C, Murray F (2016) p 9.
120 Ibrahim DM (2015) p 565; Catalini C, Fazio C, Murray F (2016) p 12.
121 See, for example, Mäntysaari P (2010a) p 338.
122 Sahlman WA (1990) p 474; Gilson RJ (2003) p 1078; Ibrahim DM (2008) p 1413.
123 Wong A, Bhatia M, Freeman Z (2009) p 225.

that the portfolio company meets the agreed milestones. Staging is a powerful governance tool as the firm will have no future without proper funding.[124]

Angel investors traditionally have not used staging. First round investors may nevertheless want to participate in subsequent funding rounds even though they may prefer not to be contractually obligated to do so.[125] Many angel investment contracts contain a follow-on right of first refusal provision. Such a clause allows angels to participate in future rounds to capture the potential upside in successful ventures. Some angel investment contracts contain a weighted ratchet clause for protection against dilution at decreased valuation in future funding rounds.[126]

Control and multiple classes of shares. It is customary to use multiple classes of shares. The use of multiple classes of shares is part of European company law practice,[127] US start-up and venture capital practice,[128] and global stock exchange practice.

In company law practice, founders may prefer to cement their position before agreeing to issue shares to financial investors. The use of multiple voting rights or non-voting shares makes it possible to issue more shares to investors without founders or controlling shareholders losing control.[129]

Preferred stock financing was developed as a financial innovation in Britain and used extensively in Britain and the US by the end of the nineteenth century. It was partly designed to overcome shareholder objections to the issuance of additional stock, which diluted the equity of the original shareholders.[130]

In start-up funding, it is customary for entrepreneurs, employees, friends-and-family investors, and agent investors to subscribe for common stock.[131] Multiple classes of shares can be used in later funding rounds to protect and reward early high-risk investors when the company turns to lower-risk investors.

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124 Gilson RJ (2003) p 1074: "Because a financing round will not provide funds sufficient to complete the portfolio company's business plan, staged financing in effect delegates to the investors, in the form of the decision whether to provide additional financing, the decision whether to continue the company's project."

125 *Ibid.*, p 1073.

126 Wong A, Bhatia M, Freeman Z (2009) p 226.

127 See, for example, Article 10(1) of Directive 2004/25/EC (Directive on takeover bids); Mäntysaari P (2010a) sections 9.4.2 and 9.5.6. See also Marcus Opp, 'Evidence' is useless on dual-class share structures. From Marcus Opp, Professor of Finance, Stockholm School of Economics, Sweden. Financial Times, 26 March 2019.

128 See, for example, Broughman BJ, Fried JM (2013) pp 1326 – 1327.

129 See, for example, Hill J (2021) section 2.1 p 20.

130 Baskin JB, Miranti PJ Jr (1997) pp 150 – 152.

131 *Ibid.*, pp 1326 – 1327; Ibrahim DM (2008) p 1413.

Multiple classes of shares are used in venture capital practice. In principle, venture capital investors could subscribe for common stock, preference shares, convertible shares, or convertible loans. In the US, venture capital investors almost always invest through convertible preferred stock.[132]

Moreover, it is customary to use a new class of shares for each venture capital funding round: "Unlike public companies, which generally have a single class of common equity, VC-backed companies typically create a new class of equity every 12 to 24 months when they raise money."[133] The average unicorn in a sample of 135 American unicorns had eight share classes, where different classes of shares could be held by different shareholder categories.[134]

While some shares may need to be converted into common shares before an IPO,[135] multiple classes of shares have been used in many tech firm IPOs.[136] This can be illustrated with the Form S-1 registration statements of Google, Lyft, Facebook, and Snap. (a) Multiple classes of shares were used in the IPO of Google in 2004 to ensure that the founders and key executives remained in control.[137] (b) The 2019 registration statement of Lyft describes how Lyft used Class A common stock and Class B common stock conferring different rights with respect to voting and conversion. In effect, the two founders of Lyft were to control nearly 50 per cent of the votes with 7 per cent of the common stock.[138] (c) In the 2012 IPO of Facebook, shares of Class A common stock entitled to one vote per share and shares of Class B common stock to ten votes per share. Mark Zuckerberg, the founder, protected his majority of votes by holding Class B common stock.[139] (d) Snap had three classes of common stock: Class A, Class B, and Class C. Holders of Class A common stock had no voting rights. Holders of Class B

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132 Berlin M (1998) p 21; Bratton WW (2002); Ibrahim DM (2008) p 1413; Broughman BJ, Fried JM (2013) pp 1323 and 1327.

133 Gornall W, Strebulaev IA (2020).

134 *Ibid.*

135 Broughman BJ, Fried JM (2013) p 1323: "In a trade-sale exit, VCs choose between retaining their preferred shares (and capturing most or all of the proceeds through their liquidation preferences) or converting the preferred shares into common shares. In an IPO, VCs (as a practical matter) must convert to common stock." *Ibid.*, p 1328: "If the VCs exit via an IPO, underwriters will typically insist that the VCs convert their preferred shares to common shares and give up their liquidation preferences along with other rights attached to the preferred stock."

136 See, for example, Brooke Masters, Opinion IPOs. Lyft's IPO shows some shareholders are more equal than others. Multiple class structures have become increasingly popular in the tech sector. Financial Times, 6 March 2019.

137 See "Letter from the Founders" in Google, Inc, S-1 registration statement, 18 August 2004.

138 Lyft, Inc., Form S-1 registration statement, 1 March 2019.

139 Facebook, Inc., Form S-1 registration statement, 1 February 2012.

common stock were entitled to one vote per share and holders of Class C common stock to ten votes per share. Only Class A non-voting shares were issued to investors in the IPO. In effect, the two founders of the company continued to be able to control the outcome of all matters submitted to stockholders for approval.[140]

According to data collected by Jay Ritter,[141] structures with multiple classes of shares were rather rare in US IPOs from 1980 to 2014. However, such structures were used in 35 per cent of US tech IPOs between 2014 and 2018.

The Council of Institutional Investors, whose members include mutual fund managers, pension plans, foundations and endowments, has asked US stock exchanges to require "sunset provisions" for all newly-listed companies with dual-class structures.[142] A sunset provision would move the company to a one share, one vote structure once it has been public for a period of time.

However, SEC rules do not mandate that the rules of a national securities exchange must provide for a "one share, one vote" requirement for listed issuers.[143] Internationally, the popularity of structures with multiple classes of shares has forced some stock exchanges that have not permitted them in the past to consider introducing them in the future. The London market is no exception.[144]

What one can learn is that maintaining control in the future can be important for founders. The use of multiple classes of shares is one of the ways for founders or controlling shareholders to maintain control. Permitting the use of multiple classes of shares should be regarded as necessary for policy reasons since their absence would hamper the growth of a country's tech industry.[145]

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140 Snap Inc., Form S-1 registration statement, 2 February 2017.

141 Initial Public Offerings: Updated Statistics. Jay R. Ritter, Cordell Professor of Finance, University of Florida, December 31, 2018.

142 Website of the Council of Institutional Investors.

143 SEC Release No. 34 – 85828 (May 10, 2019), III.E.3: "[T]he Commission received one comment letter on LTSE's Form 1 application. In its comment letter, the Council of Institutional Investors ('CII') advised that it could not support LTSE's Form 1 application ... The issues raised in the CII Letter do not provide a basis for the Commission to reject LTSE's Form 1 application. Commission rules do not mandate that the rules of a national securities exchange must provide for a 'one share, one vote' requirement for listed issuers."

144 Lu L, Ye N (2018) p 530: "At present, the Shanghai and Shenzhen stock exchanges do not permit the dual-class structure and consequently have lost the listing of several tech firms to the New York stock exchange and Nasdaq. Currently, London, Hong Kong and Singapore have been considering introducing dual-class shares as they fear losing their prestigious status as global financial centres, and especially, in terms of attracting IPO business." Hill J (2021) section 2.1 p 19: "Allow companies with dual class share structures to list in the premium listing segment but maintain high corporate governance standards by applying certain conditions."

145 See Reddy B (2020) on how this question has hampered the growth of tech in the UK.

Board seats. Board seats are an important form of control. Because of the separation of powers in the company, the company is in the legal sense controlled by its board (section 2.4.5). Legal control complements de facto control by the entrepreneur, the founders, other controlling shareholders, or any other person.

Angel investors customarily do not have board seats[146] but rely on informal channels to influence the firm. In contrast, venture capitalists want board seats and tend to dominate the board.[147] According to a study by Wong, insiders had a majority in over 80 % of the boards in the sample of angel-backed firms but comprised the majority in only 13.9 % of the boards in venture-capital-funded firms.[148]

Board seats can give venture capitalists the power to affect corporate decisions and choose the form of exit according to their own preferences. In practice, "independent" board members have incentives to side with the venture capitalists that chose them.[149] After the venture capital exit, control will change hands and may sometimes return to the entrepreneur.[150]

The allocation of board seats to venture capitalists reflects the fact that their ancillary services are regarded as vital for the success of start-ups and much better than the services of shareholders in general. In the nineteenth century, shareholders turned out to be a poor source of management and monitoring services, which led to the separation of powers in the company (section 2.4.5).

The evolution of venture capital after covid-19. The covid-19 crisis accelerated the evolution of venture capital practices. Traditional venture capital investments are preceded by lengthy negotiations in person and traditional venture capital management firms ask for board seats to control portfolio companies. But due to covid-19, meetings in person were largely replaced by meetings on video-conferencing platforms. This influenced the practices of Tiger Global Management, a New York hedge fund that also invests in private tech firms. Since meetings can be arranged on video-conferencing platforms, dealmaking is faster. Tiger Global does not ask for board seats. Instead, it uses metrics to judge performance. Competition from Tiger Global has forced Californian venture capital management companies to offer more generous terms. Central bank capitalism may have help-

146 Wong A, Bhatia M, Freeman Z (2009) p 226.
147 *Ibid*., p 224; Broughman BJ, Fried JM (2013) pp 1329 and 1344 – 1345.
148 Wong A, Bhatia M, Freeman Z (2009) p 225.
149 Ibrahim DM (2008) pp 1414 – 1415. See also Ibrahim DM (2013) p 262.
150 Bratton WW (2002) pp 897 – 898.

ed, because there is plenty of money that must be invested somewhere. SoftBank has altered its practices as well.[151]

Lock-in clauses. Lock-in clauses are connected to the transferability of shares. On one hand, the firm can benefit from the transferability of shares. The transferability of shares makes it possible to manage the share ownership structure of the company and the pool of shareholders that provide services to the firm. Moreover, the transferability of shares can reduce shareholders' perceived risk exposure and therefore even the firm's costs for funding and ancillary services. On the other, since shareholders are important agents of the firm (under the agency theory as applied in this book) and controlling shareholders are particulary important agents of both the firm and other shareholders, it is customary in corporate practice to restrict the transferability of shares.[152] It would be unusual to restrict the transferability of shares as a default rule.[153]

In practice, both the firm and financial investors rely on controlling shareholders as agents. Both the long-term survival of the firm and the future of financial investors' investments depend on the quality of the services of the firm's controlling shareholder or shareholders.[154]

In venture capital practice, contract terms customarily bind the key people such as the founders to the company for a relatively long period of time. This is necessary, because the success of a start-up or growth firm depends on the personal qualities of its key people.[155] It is not the business of venture capital firms to take care of the day-to-day management of portfolio companies.

Therefore, the contractual framework (including a subscription agreement, a shareholders' agreement, and other agreements) will bind key people such as

151 The Economist, Schumpeter. A new Tiger in town. How a hyperactive technology fund is changing Silicon Valley, 26 June 2021; Miles Kruppa, SoftBank's second Vision Fund speeds up pace of investment. Financial Times, 11 July 2021.

152 Mäntysaari P (2010a) section 9.5.8; Mäntysaari P (2010c) pp 169 – 170; Heminway JM (2017) pp 190 – 191.

153 In the US, "the CROWDFUND Act" (Capital Raising Online While Deterring Fraud and Unethical Non-Disclosure Act, Title III of the JOBS Act) lays down resale restrictions. Heminway JM (2017) pp 201 – 202: "The restrictions on resale in the CROWDFUND Act, like other transfer restrictions, may hamper the development of a liquid trading market for the affected securities. This effect, in turn, makes it harder for investors to realize value from their investments, since they may or may not find a ready and willing buyer for their securities when they want to exit their investments. Moreover, the lack of a public market is likely to result in a marketability discount in the pricing of any investments sold."

154 Mäntysaari P (2010a) section 9.2.6 and pp 306 – 308.

155 See, for example, "Letter from the Founders" in Google, Inc, S-1 registration statement, 18 August 2004.

founders to the company. The contractual framework will restrict their share transfers. They will undertake to enter into employment contracts with the company and accept non-compete obligations. Moreover, a party will not be able to assign the contractual framework in whole or in part to a third party without the prior written consent of the other parties.

The use of lock-in clauses is not limited to venture capital. In IPO practice, it is customary to bind key shareholders to the company for a certain period of time. Such terms are designed to reduce market investors' perceived risk, improve access to funding, increase the price payable for the shares, and reduce the firm's funding costs. Controlling shareholders thus matter to investors in IPO practice.

This IPO practice can be contrasted with a direct listing. In a direct listing, no new shares are issued to investors. It is not really necessary for the firm to use a lock-up period. For example, the direct listing of Spotify was a way for existing shareholders to cash out.[156]

SME markets "typically adopt operating practices to preserve investor interest and market integrity. These include a lock-up period for major shareholders around equity offerings (i.e. a predetermined period following an IPO where large shareholders are restricted from selling their shares), institutional arrangements for mentoring, and strict delisting rules".[157] For example, the Rule Book[158] of Euronext Growth Market operated by Euronext Dublin contains a Rule that lays down lock-ins for new businesses.[159] These lock-ins apply for a period of one year to "Related Parties", "Applicable Employees", and "Substantial Shareholders" all defined in the Rule Book,[160] but do not apply "in the event of an intervening court order, the death of a party who has been subject to this Rule or in respect of an acceptance of a take-over offer for the Issuer which is open to all Shareholders."[161]

Use of proceeds. In many large financial transactions, it is customary to limit the use of proceeds. For example, project finance contracts limit the use of funds

156 Spotify Technology S.A. Form F-1 Registration Statement under the Securities Act of 1933, 28 February 28; The Economist, Play list, 4 April 2018.
157 OECD (2015c) p 126.
158 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019).
159 *Ibid.*, Part II, Rule 5.2: "Where an Applicant's main activity is a business which has not been independent and earning revenue for at least two years, it must ensure that all Related Parties and Applicable Employees as at the date of Admission agree not to dispose of any interest in its Securities for one year from the Admission of its Securities …"
160 *Ibid.*, Part II, Rule 5.0.
161 *Ibid.*, Part II, Rule 5.2.

to the purposes of the project and prohibit the use of funds in other ways without the prior written consent of project finance lenders. The business plan of the project is made part of the contractual framework.

Venture capital is no exception in this respect. Venture capital contracts limit the use of funds raised from venture capital investors. For example, the company may undertake to use the raised funds pursuant to the subscription agreement in the furtherance of the company's business in accordance with the business plan.

In many large financial transactions, it is also customary to restrict distributions and asset disposals. The same applies to venture capital. It would be rather pointless to distribute venture capital investors' money as dividends to shareholders. However, the parties may agree on the rights of the holders of preference shares, and on the pari passu ranking of the dividend rights of shareholders. Moreover, the company will not grow unless it invests its money into useful assets. Asset disposals may therefore be limited and require the consent of venture capitalists when the company takes internal corporate action or complies with the contractual framework.

The contractual framework will thus set out dynamic duties to use the proceeds in particular ways. Such terms can be complemented by open standards.[162] For example, the founders may undertake a duty to promote the best interests of the company and ensure that its business is conducted in accordance with good business practice and the business plan.

Exit. An exit strategy is "foremost in most venture capitalists' minds"[163] and in the minds of many optimistic founders. It is customary to agree on the terms of exit in venture capital practice for this and the following reasons.

First, in digital economy, a start-up is a business venture that often is not designed to make a profit from operations. It would be difficult for a start-up to grow and gain market share from traditional profit-oriented firms without the acceptance of losses and access to equity capital to cover the losses. Operational losses are part of the founders' business model. This is summed up by Kenney and Zysman: "[R]ather than making money, the firm's sole task is to capture market share driving competitor startups and/or incumbents from the market segment by undercutting them even as the aggressor startup loses money – the capital investments subsidize the losses."[164] Founders expect to make a profit from later-stage investors or a trade sale. Kenney and Zysman summed up this as well:

162 For dynamic duties and open standards, see Mäntysaari P (2010b) pp 43, 166 – 167 and 222 – 223; Mäntysaari P (2010a) pp 110 – 111 and 175 – 176; Mäntysaari P (2015) p 256.
163 Berlin M (1998) p 22.
164 Kenney M, Zysman J (2019).

"Paradoxically, a sustainable business may not be the objective and may not matter, if earlier investors, founders, and management can sell their stakes in the business at higher valuation multiples to later-stage investors or through an IPO or trade sale before the actual unit economics and profit-generating potential of a company are clarified through repeated performance."[165]

Second, investments made by a venture capital fund are constrained by the terms of the fund. Venture capital funds must therefore ensure rights to an exit within a certain period of time. This can increase the firm's agency costs, because there is a potential conflict between the interests of the firm and the interests of the fund. There is a similar potential conflict between the interests of the founder or entrepreneur and the interests of the fund.[166]

Third, exit transactions tend to require corporate action. Venture capital contracts need to lay down how parties shall vote.[167]

Fourth, the valuation of shares may be higher in a transaction that includes all shares in the company as the acquirer will then get better access to the company's assets. A private equity fund customarily acquires all shares in the target company as this makes it much easier to organise refinancing and distribute assets to the fund. A commercial enterprise needs all shares in the target company to fully integrate it into its existing operations.

Venture capital investors sometimes require drag-along rights that allow them to force common shareholders to vote for any transaction favoured by the VCs. A minority shareholder customarily prefers a tag-along right. A tag-along right means a right to join when the majority shareholder sells its share block. Shareholders customarily do not prefer to end up as unprotected minority shareholders after somebody has obtained control and most shares in the company.[168]

In traditional angel investment contracts, it is not customary to agree on the form of exit.[169] This is because of angel investors' earnings logic. Angel investors make a profit if the company succeeds in raising venture capital that ultimately will lead to an exit.

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165 *Ibid.*

166 Gilson RJ (2003) pp 1074–1075; Ibrahim DM (2008) p 1415: "As a general rule, venture capitalists require earlier exits due to the short life of venture funds and the need to make distributions to fund investors, while entrepreneurs wish to delay exit in order to extend private benefits such as a steady salary. Redemption and other specific exit rights address these potential conflicts by allocating the exit decision to venture capitalists."

167 Broughman BJ, Fried JM (2013) p 1331.

168 *Ibid.*, p 1331.

169 Ibrahim DM (2008) pp 1422–1423.

In US angel investment practice, a contract term may allow the company to repurchase the stake of the angel. Such a clause is a way to get rid of bad investors.[170]

There are various kinds of statutory exit rights.[171] To protect minority shareholders in listed companies, EU securities law provides for a statutory sell-out right. It is complemented by a statutory squeeze-out right.[172] Moreover, EU securities law requires a mandatory bid in the event that a party obtains control in a listed company.[173] In the US, one might ask whether Rule 10b-5 that targets securities fraud could be seen as a functional equivalent of the statutory sell-out right as a way to protect minority shareholders. The answer is no in the light of *Santa Fe Industries*.[174] In this landmark decision, the Supreme Court limited the scope of Rule 10b-5 by placing principal emphasis on the words "deceptive" and "manipulative" from section 10(b) of the Securities Exchange Act of 1934. This indicates that "the Supreme Court [was] determined to relegate corporate shareholders to state remedies".[175]

5.3.5 Conclusions

We can draw several conclusions from angel funding and venture capital practices. First, start-up funding is staged. The staging of funding means that it is important to focus on transition from early-stage funding to later-stage funding. Angel investors and venture capitalists protect their rights in later funding rounds. Second, it is common practice to use multiple classes of shares. Third, start-up funding is for a certain number of years. It is common practice to bind key people and key shareholders to the project for a certain number of years. "Exits at will" would not work.[176] Exit terms are an important part of the contractual framework. Fourth, the portfolio company is controlled by key shareholders or venture capital managers during the term of the investment con-

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170 Wong A, Bhatia M, Freeman Z (2009) p 226: "Many entrepreneurs cite this clause as a way to rid themselves of 'bad apples' or investors whose vision does not coincide with that of the founders."

171 See Fleischer H (2018e) p 701 distinguishing between the winding-up remedy, the buyout remedy or withdrawal rights, the oppression remedy, and appraisal rights.

172 Articles 15 and 16 and recital 24 of Directive 2004/25/EC (on takeover bids).

173 Article 5 of Directive 2004/25/EC (on takeover bids).

174 Santa Fe Industries, Inc. v. Green, 430 U.S. 462 (1977).

175 Campbell RB Jr (1978) p 193.

176 For closely-held companies generally, see Fleischer H (2018e) p 704.

tract. While angel investors do not require control, there are particular control issues in venture capital. Fund investors have no control rights in the portfolio company and very limited rights in the fund. The representatives of the venture capital management company have large control rights. They control the fund and the boards of portfolio companies. Since they act as gate-keepers to funding, they can use equity investments from the fund as leverage. There is separation of capital investment (to the fund), share ownership (in the portfolio company), and control (by fund managers).

5.4 SME Market Design Practices

5.4.1 General Remarks

From the perspective of the issuer-firm, stock exchanges provide core services and ancillary services. The core services include facilitating trading in the company's securities, providing access to market funding, and facilitating the provision of shareholders' services to the firm. For example, stock exchanges provide an exit channel for shareholders and can thus help to manage the share ownership structure of the company and the provision of shareholders' services.[177] Stock exchanges provide many ancillary services connected to these core services.[178]

It is assumed that SME equity trading infrastructures matter:[179] "[S]tock markets that provide significant economic incentives to support small companies and associated infrastructure in the aftermarket will create higher rates of capital formation that, in turn, will generate jobs, economic growth and tax receipts."[180]

Where an equity trading infrastructure is instead designed for large companies, institutional investors, and for-profit intermediaries, the trading infrastructure will neither work well for SMEs nor bring them to markets:[181] "One-size-fits-all stock market structures harm SME listings, which are typically less liquid than large cap stocks and require broker-dealers to support liquidity, sales and equity research."[182] There should therefore be marketplaces for SME stocks.

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177 See OECD (2015c) p 129 on the usefulness of SME exchanges.
178 See *ibid.*, p 128.
179 Market design always matters. See Ostrom E (2005); Ostrom E (2010).
180 Weild D, Kim E, Newport L (2013) p 4.
181 OECD (2015c) p 134.
182 *Ibid.*. See also FESE (2019) p 29.

According to an OECD study, SME markets differ from the main stock exchanges in several ways. SME markets customarily "set looser listing and disclosure requirements", "charge lower listing and maintenance fees", and "adopt operating practices to preserve investor interest and market integrity".[183]

Obviously, SMEs prefer lower costs. Fees and other costs designed for large companies are discouragingly high for SMEs. According to the OECD study, SME markets customarily "charge lower listing and maintenance fees" than the main stock exchanges.[184] This said, the costs for companies to list and remain listed on a platform tend to remain high.[185]

The question is how to reduce costs for SMEs. On one hand, SME exchanges could try to reduce costs for SMEs by lowering standards and increase their own revenue by increasing trading volumes in the short term. On the other, lower standards could reduce the quality of issuers and trading volumes in the long term.[186]

There are conflicting objectives. Generally, new business models may be necessary to reduce costs for SMEs without compromising quality, as "[p]ure for-profit models for growth platforms can have perverse incentives and cannot ensure sustained capacity to bring SMEs to the market and, equally importantly, support them in the aftermarket".[187] Thinking outside the box, the new LTSE has chosen a low-cost model in which an LTSE group company earns revenue from the sale of software and services to start-ups.

It can be difficult to create a successful SME exchange balancing costs and standards. A working paper of the World Bank Group identifies approaches that "are widespread and/or could be beneficial to consider". They include the following: "(1) focus on SMEs with a sizeable growth rate, (2) have the SME exchange legally related to the main board, (3) do not reduce disclosure content to reduce costs, (4) allow private placements, (5) have well regulated advisors to vet issuers and provide comfort to investors about the quality of the issue, (6) have outreach, public awareness campaign and training for SMEs, [and] (7) consider tax incentives for investors".[188] Tax incentives obviously play an im-

183 OECD (2015c) p 126. See also Table 7.4.
184 *Ibid.*
185 *Ibid.*, paragraph p 128.
186 Daniel Davies, A scammer's charter for European capital markets. Financial Times, 9 November 2015: "The less rigorous the listings rules and the less onerous the reporting and prospectus criteria, the easier it is to gull investors into swapping real cash for worthless shares."
187 OECD (2015c) p 134.
188 Harwood A, Konidaris T (2015) Abstract (and p 6). See also World Federation of Exchanges (2018) p 12.

portant role,[189] but there seems to be much more to do before SME markets attract both issuers and investors and are sustainable in the long term.

Regulators should strike a balance between conflicting objectives.[190] One may also ask whether listing standards should be decided on by the exchange operator or a third party.[191] In the following, we will have a look at what has worked for SME exchanges in the past.

5.4.2 Feeder Principle v the Nasdaq Model

There are three models for junior stock exchanges for SMEs. The first is the sequential or feeder model under which successful feeder-listed SMEs can move on to the main market. The second is the sectorial model. Such exchanges tend to focus on tech. The third is the self-regulated exchange. The AIM is an example of such an exchange.[192]

Many SME exchanges have been inspired by Nasdaq.[193] Operators of SME marketplaces often have chosen between the feeder principle and the so-called Nasdaq model.

When an SME marketplace operates in parallel with a main market, it can adopt a junior market strategy and act as a feeder for the main market.[194] The feeder principle means that the SME marketplace is a separate board within

189 Harwood A, Konidaris T (2015) p 6; OECD (2015c) pp 131 and 134.

190 See, for example, Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 2: "To reap the full benefits of these dedicated platforms for the CMU, the Commission will ensure through the implementation of MiFID II that the requirements applying to them strike the right balance between providing sufficient investor protection and avoiding unnecessary administrative burden."

191 See, for example, Steil B (2001) pp 343–344: "Listing is fundamentally a quality control function … It could just as easily be performed by accounting firms or rating agencies, and done on a competitive basis."

192 Vismara S, Paleari S, Ritter RJ (2012);

193 OECD (2015c) p 129; Posner E (2005). NASDAQ was initially an acronym for the National Association of Securities Dealers Automated Quations.

194 OECD (2015c) p 126. See, for example, NYSE Euronext, SEC Form 10-K filing for the fiscal year ended December 31, 2007, p 3, Strategy, Listings: "We intend to leverage our premier brand and position as the world's leading listings venues with the deepest global pool of liquidity to compete aggressively for new listings on a global scale. With multiple listings platforms in both the United States (the NYSE and NYSE Arca) and Europe (Euronext and NYSE Alternext), we are uniquely situated to target a highly diverse range of companies from around the world to enable the capital-raising process."

an established exchange market. For example, Euronext Growth is based on the same pan-European trading platform as the Euronext main market.

The Nasdaq model means that the SME marketplace is developed as a separate market. AIM, KOSDAQ, and TSX Venture are examples of separate markets.[195]

In the late 1970s and early 1980s, new market segments were created according to the feeder principle.[196] The feeder principle meant in practice looser listing and disclosure requirements.[197] Exchanges that operated according to the feeder principle with lower entry requirements and lower information standards than the main market did not survive the 1987 stock market crash as "investors perceived that feeder markets quoted poorly-performing companies and preferred to wait the best ones to be promoted to the main market".[198]

In the 1990s, new markets chose the Nasdaq model. The Nasdaq model is characterised by relaxed listing requirements combined with high information standards.[199] For example, the STAR Market operated by the Shanghai Stock Exchange (SHSE) is generally regarded as a Nasdaq-style exchange. It was "ordered into existence by Chinese President Xi Jinping" in November 2018 "as a way of bolstering mainland China's technology companies amid the US-China trade war" and started its operations in July 2019.[200] The STAR Market is controlled by the state.[201]

This said, the STAR Market is even an example of the feeder model, the junior exchange model, and the multi-tiered capital market of China with second-tier segments in the two senior stock exchanges SHSE and Shenzen Stock Exchange (SZSE). The National Equities Exchange and Quotations (NEEQ) was designed to serve the financial needs of SMEs. The NEEQ market was made accessible to SMEs by replacing the traditional merit regulation with a registration regime and removing most entry barriers. The NEEQ market is highly illiquid but offers more opportunities to raise finance.[202]

195 OECD (2015c) p 126.
196 Ibid., p 132.
197 *Ibid.*, p 126. See also Table 7.4.
198 *Ibid.*, p 132.
199 *Ibid.*
200 Daniel Ren, Shanghai Stock Exchange to debut Nasdaq-style market for tech stocks on July 22, three weeks ahead of schedule, South China Morning Post, 5 July 2019.
201 Hudson Lockett, 'China's Nasdaq': Shanghai's new tech trading venue explained. Financial Times, 19 July 2019. See also Rules Governing the Review of Offering and Listing of Stocks on the Science and Technology Innovation Board of Shanghai Stock Exchange (1 March 2019).
202 Xu W, Zhu S, Wu Z (2020).

5.4.3 Relaxed v Strict Listing Requirements and Disclosure Requirements

To reduce costs for SMEs, requirements should be relaxed. The choice is between strict or relaxed listing requirements and between strict or relaxed ongoing disclosure requirements. The adoption of relaxed requirements can be complemented by mentoring and pre-IPO incubators.

Strict v relaxed listing requirements. It is customary for SME exchanges to adopt relaxed listing requirements. Generally, such listing requirements include "more relaxed criteria on operating history, minimum number of shareholders, past financial performance and number of free-float shares".[203]

The choice of relaxed listing requirements can be illustrated with the London Stock Exchange's AIM Rules. They seem to have worked very well.[204] The entry criteria for AIM "do not include requirements for trading record, minimum size, prescribed levels of shares held by the public, nor they demand pre-vetting of admission documents by the Exchange or by the United Kingdom Listing Authority (UKLA)".[205] Neither do the AIM Rules require compliance with a corporate governance code: "The AIM Rules do not mandate any corporate governance code or disclosures. However, companies need to provide details on their website as to whether or not they have followed a governance code and, if they have not, narrative details of their practices."[206] AIM has relatively simple listing requirements, because it was originally designed as a secondary market only. The primary market operates as private placements. Since there are no US-style resale restrictions after private placements, the secondary market can work for both retail and professional investors. AIM originally benefited from the lighter regulation of MTFs. The trend of ensuring a level playing field in EU securities law increased the cost of AIM access and contributed to a decline in AIM listings.[207]

Sometimes market integrity can be fostered by standards that are higher than in the main market. This can be the case when the benchmark is Nasdaq but the main market has lower standards. This was the case with Brazil's Novo Mercado and Deutsche Börse's Neuer Markt.

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203 OECD (2015c) p 126.

204 Armour J, Bengtzen M, Enriques L (2018) p 439: "Empirical studies suggest that firms that list on AIM are typically smaller and younger than those listing on the Main Market, and that they join AIM to take advantage of its lower costs. AIM-listing firms are not, however distinguishable from Main Market firms in terms of market valuation or risk of failure."

205 OECD (2015c) p 126.

206 *Ibid*.

207 Armour J, Bengtzen M, Enriques L (2018) pp 439 – 440.

Novo Mercado's approach can be illustrated by comparing the standards for corporate governance and shareholders' rights in the Novo Mercardo market and in the Level 2 segment of the BOVESPA market of the São Paulo Stock Exchange. They were compared in an OECD study:[208]

- Novo Mercado, corporate governance and shareholders' rights: "Issue only voting shares. Give tag-along rights to all shareholders at the full price of the deal. Make a public tender offer at least at the economic value in case of delisting or cancellation of the Novo Mercado's contract with BOVESPA. The board of directors must have a minimum of five members, all with unified mandates of up to two years, and a minimum of 20 percent of independent board members. Discuss through arbitration any shareholder-company dispute that arises related to the listing rules, the company bylaws, Corporate Law provisions, and other norms of the Brazilian capital market. The company also commits to maintain at least a 25-percent free float."[209]
- BOVESTA, Level 2: "Requires companies to abide by all of the obligations set forth in the Novo Mercado regulations, with a few key exceptions. First, Level 2 companies retain the right to maintain existing preferred shares and issue new ones up to the level permitted by the law. These preferred shares enjoy tag-along rights at the minimum of 80 percent of the price received by the selling controlling shareholder and are also entitled to voting rights in some key situations (such as company mergers and incorporations and contracts between the controlling shareholder and the company), provided they are voted in a general shareholders' meeting."[210]

Strict v relaxed ongoing disclosure requirements. The Nasdaq model is characterised by low listing requirements combined with high information standards.[211] In the 1990s, the Nasdaq model prevailed. It is now understood that costs should not be reduced by reducing disclosure content. It is regarded as better to reduce "other requirements, such as the frequency of submitting disclosure documents and allowing online dissemination rather than requiring printed materials".[212]

Mentoring. One may ask what will happen if listing requirements are relaxed. Will the quality of listed companies become worse? Will issuers understand the

208 OECD (2015c) pp 127–128.
209 *Ibid*., Box 7.4.
210 *Ibid*.
211 *Ibid*., p 132.
212 Harwood A, Konidaris T (2015) p 6. See also Daniel Davies, A scammer's charter for European capital markets. Financial Times, 9 November 2015. Davies mentions the cases of Gowex and Globo as bad examples.

culture of the market? Will the integrity of markets suffer? One of the practices to preserve market integrity is mentoring.[213]

The use of an educator-monitor can improve the quality of issuers and increase the level of integrity, transparency, corporate governance, and investor protection in general.[214] Mentoring is in other words intended as a functional equivalent to traditional compliance obligations.[215]

For example, mentoring is used by AIM and Euronext Growth. The AIM Rules require the company to work closely with a Nominated Adviser ("Nomad")[216] during the admission process and its time as a public company: "A Nomad undertakes extensive due diligence to ensure that a company is suitable for AIM, provides guidance throughout the flotation process, prepares the company for being on a public market, helps prepare the AIM admission document, confirms appropriateness of the company to the Exchange, and acts as the primary regulator throughout a company's time on AIM".[217]

Euronext Growth uses listing sponsors.[218] The listing sponsor "is usually an investment bank, but can also be an advisory firm, such as an accountant or corporate finance boutique, which will work alongside an investment bank".[219] The listing sponsor will cooperate with the company and its legal advisers and auditors.

The company must have a listing sponsor before it applies for a listing on Euronext Growth. The listing sponsor considers whether the company meets all applicable criteria for listing. Moreover, an issuer must have a listing sponsor on a permanent basis after admission.

Before Alternext became Euronext Growth,[220] the Alternext model of using listing sponsors was described in an OECD report as follows: "Companies that seek to be listed on Alternext have to choose a listing sponsor to assist them during the admissions procedure and guide them throughout their time of listing on Alternext. The listing sponsor is a company acting as an investment-services pro-

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213 OECD (2015c) pp 126 and 134–135.
214 *Ibid.*, pp 130.
215 For nudging, see Thaler RH, Sunstein CR (2008).
216 London Stock Exchange, AIM Rules for Nominated Advisers (July 2018).
217 OECD (2015c) pp 126.
218 See Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 4.7 and Appendix IV.
219 Euronext website.
220 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 1.1: "... Alternext Market: An multilateral trading facility within the scope of Article 4(1)(22) of MIFID operated by the respective Euronext Market Undertakings under the commercial name 'Euronext Growth' ..."

vider, audit firm, legal counsel or corporate finance specialist. It assesses a company's suitability for listing, participates in drafting the prospectus or offering circular, it coordinates the due diligence process and liaises with the regulator and/or the market operator of Alternext."[221]

Pre-IPO incubators. SME exchanges can invest more in pre-IPO services such as pre-IPO incubators. Trends in the development of the pre-IPO services of SME exchanges can be illustrated with the cases of the Long-Term Stock Exchange (LTSE) in the US and Deutsche Börse Venture Network in Germany.

Deutsche Börse Venture Network is Deutsche Börse's customised pre-IPO service offering for young companies. It was launched in 2015. For firms, Deutsche Börse Venture Network means support in the raising of angel and venture capital funding and a range of specially developed services. For venture capital investors, Deutsche Börse Venture Network gives access to a network of aspiring enterprises and investment opportunities. For Deutsche Börse, the service offering is a way to increase IPOs in the future.

The Long-Term Stock Exchange (LTSE) is marketed as "the only U.S. stock exchange with a mission to help companies create lasting businesses and empower long term-focused investors". In the marketing of the exchange, the stated intention of LTSE is to "enable companies to prioritize the long term". This will be achieved by listing rules: "[W]hen companies list with the exchange to sell shares to the public, they will adopt a set of governing practices that mirror their long-term horizon."[222]

There is relatively little room for innovation because of the mandatory legal framework for national securities exchanges.[223] In any case, LTSE is designed to combine the characterististics of a start-up incubator and a traditional exchange.[224] LTSE is backed by the Long-Term Investor Coalition (LTIC), "a network of institutional investors that share LTSE's mission of empowering long term-focused companies and commitment to creating value over time".[225] The listing standards of LTSE are intended to foster long-term value creation.[226] LTSE will also reduce fees for issuers as LTSE sells software tools to company builders.

221 OECD (2015c) Box 7.5, NYSE Alternext trading model.

222 The website of LTSE, Frequently asked questions. See also Cydney Posner, Will the Long-Term Stock Exchange Make a Difference? Harvard Law School Forum on Corporate Governance, Saturday, June 8, 2019.

223 See SEC Release No. 34 – 85828 (May 10, 2019).

224 The Economist, NOIPO? 16 May 2019.

225 The website of LTSE, Frequently asked questions.

226 LTSE, The Long-Term Stock Exchange proposes enhanced listing standards for a new generation of public companies. New York, 26 June 2019.

The website of LTSE sums up this approach as follows: “We are building software tools and a coalition of investors for 21st-century companies.”

5.4.4 Dealing with Illiquidity

SME exchanges can deal with the inherent illiquidity of SME shares in various ways in their trading rules.

First, they can foster long-termism in share ownership and limit day-to-day trading by favouring buy-and-hold strategies. This is because firms have long-term interests and long-termism is necessary to ensure market integrity in an environment with low trading volumes.[227] However, institutional investors dislike buy-and-hold strategies that limit day-to-day trading.[228]

Second, SME exchanges can use market makers or other liquidity providers. It is customary to use market makers to provide sufficient liquidity in SME markets. In Regulation NMS,[229] the SEC defines a “market maker” as a firm that stands ready to buy and sell stock on a regular and continuous basis at a publicly quoted price.[230] MiFID II contains a similar definition.[231] According to an OECD report, “the existence of well-functioning market-making systems is instrumental to the fostering of SME markets, where information asymmetries lead to potentially high monitoring costs relative to the level of investment and low levels of liquidity act as an important deterrent to public investment in SME equities”.[232] For example, Euronext Growth uses Liquidity Providers.[233]

227 OECD (2015c) p 130.

228 OECD (2015c) Box 7.5 and p 130.

229 SEC Release No. 34 – 51808 (June 9, 2005) (Regulation NMS).

230 Rule 600(b)(24) of Regulation NMS: “Exchange market maker means any member of a national securities exchange that is registered as a specialist or market maker pursuant to the rules of such exchange.” Rule 600(b)(52) of Regulation NMS: “OTC market maker means any dealer that holds itself out as being willing to buy from and sell to its customers, or others, in the United States, an NMS stock for its own account on a regular or continuous basis otherwise than on a national securities exchange in amounts of less than block size.”

231 Article 4(1) of Directive 2014/65/EU (MiFID II): “For the purposes of this Directive, the following definitions apply: ... (7) ‘market maker’ means a person who holds himself out on the financial markets on a continuous basis as being willing to deal on own account by buying and selling financial instruments against that person’s proprietary capital at prices defined by that person; ...”

232 OECD (2015c) p 130.

233 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 1.1: “... Liquidity Provider: any Member that has been appointed by the Relevant Eu-

Third, if market makers are employed to increase liquidity, they should be given adequate economic incentives. Profitable market-making creates an incentive to generate trading volume. Therefore, "[t]he ability of market makers to earn a profit on capital deployed is necessary to support smaller company stocks that trade episodically, rather than continuously, and require constant support through marketing and capital commitment".[234]

Markets with higher tick sizes for SME equity trading tend to have higher levels of IPO activity.[235] The declining trend in trading spreads and tick sizes "may have reduced transaction costs for investors", but it also "has generated disincentives for intermediaries of small caps, undermining the infrastructure and services required to support their development".[236]

Fourth, one can provide alternative trading methods depending on the level of liquidity. For example, the Euronext Growth model (formerly known as the NYSE Alternext model)[237] combines different trading methods:[238] "Depending on the liquidity of the relevant Security, trades are executed through auction or continuously, according to the allocation principles specified in the Euronext Cash Market Trading Manual."[239] Investors can thus execute trades either in the Central Order Book[240] or outside the Central Order Book depending on liquidity.[241]

Fifth, one can use lock-ins to deal with the potential problems of illiquidity. According to an OECD study, SME markets "typically adopt operating practices to preserve investor interest and market integrity. These include a lock-up period for major shareholders around equity offerings (i.e. a predetermined period following an IPO where large shareholders are restricted from selling their shares),

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ronext Market Undertaking, to enhance the market liquidity of a particular Admitted Financial Instrument ..."

234 OECD (2015c) p 132. Citing Weild D, Kim E, Newport L (2013) p 17.

235 Weild D, Kim E, Newport L (2013) p 3.

236 OECD (2015c) p 134.

237 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 1.1: "... Alternext Market: An multilateral trading facility within the scope of Article 4(1)(22) of MIFID operated by the respective Euronext Market Undertakings under the commercial name 'Euronext Growth' ..."

238 See also OECD (2015c) Box 7.5.

239 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 6.3.3.

240 *Ibid.*, Part I, Rules 6.3.1 and 1.1: "... Central Order Book: that part of the trading platform of the Euronext Growth Markets in which all submitted orders and any modifications thereto are held until matched, expired or withdrawn ..."

241 *Ibid.*, Part I, Rule 6.4.

institutional arrangements for mentoring, and strict delisting rules".[242] For example, the Euronext Growth Market operated by Euronext Dublin applies lock-ins for new businesses.[243] These lock-ins apply for a period of one year to "Related Parties", "Applicable Employees", and "Substantial Shareholders".[244] AIM applies lock-ins for new businesses.[245]

Sixth, one can facilitate analyst coverage. Analyst coverage generates trading volume, increases demand, and increases the share price.[246]

In the light of such market practices, there is a lot market regulation can do.

First, governments can ensure that there is a better market infrastructure for trading in inherently illiquid SME stocks. One-size-fits-all stock market structures harm SME listings.[247]

Second, governments can ensure that there are proper economic incentives for broker-dealers and providers of investment research in the secondary market. The market is not sustainable without such incentives.[248]

Third, government policies can address the lack of liquidity in SME equity markets through measures that foster retail investment. For example, the JOBS Act of 2012 created more room for retail investors by raising the threshold at which public disclosure and related requirements kick in under Section 12(g) of the Exchange Act.[249] The JOBS and Investor Confidence Act of 2018 (also known as JOBS Act 3.0) would have created more room for emerging growth companies and retail investors but was not passed by the Senate.

Fourth, governments can reduce liquidity by charging taxes on SME securities transactions and increase liquidity by abolishing such taxes. For example, UK stamp duties are from April 2014 no longer chargeable on transactions in el-

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242 OECD (2015c) p 126.

243 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part II, Rule 5.2.

244 *Ibid*., Part II, Rule 5.0.

245 London Stock Exchange, AIM Rules for Companies (effective 3 January 2018), Part One – AIM Rules, rule 7: "Where an applicant's main activity is a business which has not been independent and earning revenue for at least two years, it must ensure that all related parties and applicable employees as at the date of admission agree not to dispose of any interest in its securities for one year from the admission of its securities."

246 Demiroglu C, Ryngaert M (2010).

247 OECD (2015c) p 134.

248 *Ibid*., p 132; Weild D, Kim E, Newport L (2013) p 3: "Broker-dealers, who are the facilitators of capital formation, must have adequate incentives in order to support small company IPO activity."

249 OECD (2015c) p 134.

igible securities on the London Stock Exchange's AIM and High Growth Segment.[250]

Fifth, there should be a corporate governance model that makes it easier for firms and investors to replace short-term exits with long-term voice and loyalty (section 5.4.5).[251]

5.4.5 Corporate Governance Model

Small firms and large firms need different corporate governance models. The existence of many layers of hierarchy and the separation of work in large firms may hamper information flows and make it more difficult for large firms to adapt to changes in the marketplace.[252] A small firm tends to have fewer layers of hierarchy and less separation of work. Moreover, there is less separation of share ownership and management in a small firm.

The different needs of small and large firms were recognised in continental European company law in the nineteenth century (section 2.4.9). The needs of different kinds of firms help to explain why continental European company laws distinguished between partnerships, limited partnerships, and limited-liability companies (sociétés en nom collectif, sociétés en commandite, sociétés anonyme; offene Handelsgesellschaften, Kommanditgesellschaften, Aktiengesellschaften). Moreover, the German GmbH Act of 1892 was adopted after the limited-liability company form had been adapted to the needs of larger firms in the company law reform of 1884 and become too heavy for small firms.

The governance model that parties tend to choose in venture capital transactions is designed for relatively small firms. In venture-capital-funded firms, founders and entrepreneurs are the key people, the number of employees is small, managers and employees can be shareholders, and venture capitalists provide important ancillary services in addition to funding.

SME exchanges should, therefore, take the particular characteristics of SME firms into account in the context of corporate governance. To some extent this seems to be the case as can be illustrated with the different practices of Euronext Growth and AIM.

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250 *Ibid.*

251 See Hirschman AO (1970) on the notions of exit, voice, and loyalty.

252 Williamson OE (1984).

Euronext Growth was preceded by Alternext. Companies that sought to be listed on Alternext were required to choose a listing sponsor.[253] Like its predecessor, Euronext Growth requires the use of a Listing Sponsor as a monitoring, mentoring, and nudging mechanism.[254] However, the rules of Euronext Growth do not require the use of any particular board structure or composition. This is understandable in the light of the fact Euronext Growth Market rules are embedded in a wider legal framework and designed to be used in all European jurisdictions in which Euronext operates a Growth Market.

The Euronext Growth Market Operated by Euronext Dublin is an exception. The particular rules for the Euronext Growth Market Operated by Euronext Dublin require disclosure on a website of "details of the corporate governance code that the Issuer has decided to apply, how the Issuer complies with that code, or if no code has been adopted this should be stated together with its current corporate governance arrangements".[255] In the Dublin market, an issuer must also ensure that its board members are responsible for compliance with the Euronext Growth Markets Rule Book.[256]

Like Euronext Growth, the London Stock Exchange's AIM is embedded in a wider legal framework.[257] Unlike Euronext Growth, however, the framework is that of one country only with the regulation of the London Stock Exchange's

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253 OECD (2015c) p 131, Box 7.5: "Companies that seek to be listed on Alternext have to choose a listing sponsor to assist them during the admissions procedure and guide them throughout their time of listing on Alternext. The listing sponsor is a company acting as an investment-services provider, audit firm, legal counsel or corporate finance specialist. It assesses a company's suitability for listing, participates in drafting the prospectus or offering circular, it coordinates the due diligence process and liaises with the regulator and/or the market operator of Alternext."
254 Euronext Growth Markets Rule Book (Issue date: 7 June 2019. Effective Date 10 June 2019), Part I, Rule 4.7.1. Instead of a Listing Sponsor, a Growth Advisor is used in the Dublin market. *Ibid*., Part II, Rule 5.27.
255 *Ibid*., Part II, Rule 5.26.
256 *Ibid*., Part II, Rule 5.24: "An Issuer must: (a) have in place sufficient procedures, resources and controls to enable it to comply with these Rules; … (d) ensure that each of its Directors accepts full responsibility, collectively and individually, for its compliance with these Rules …"
257 London Stock Exchange, AIM Rules for Companies (effective 3 January 2018), Introduction: "AIM is a market for smaller and growing companies and is a multilateral trading facility within the meaning set out in the Handbook of the FCA and is a SME growth market. AIM is operated and regulated by the Exchange in its capacity as a Recognised Investment Exchange under Part XVIII of FSMA 2000, as such AIM is a prescribed market under FSMA 2000 … AIM companies also need to comply with any relevant national law and regulation as well as certain European Commission Directive standards and regulations where applicable, such as MAR, the DTR and the Prospectus Rules."

main market as a benchmark. All "member firms" must comply with the Rule Book of the London Stock Exchange.[258]

The AIM corporate governance rules are mainly designed for the English plc.[259] The particular characteristic in the regulation of corporate governance in AIM relates to the use of "nominated advisers" as monitors and mentors.[260] Moreover, AIM requires half-yearly reports rather than quarterly reports.[261] There are even other differences between AIM and the main market.[262]

The AIM Rules require no prior shareholder approval for most transactions unless the transaction is a reverse takeover or disposal resulting in a fundamental change of business. However, a statutory legal capital regime has allocated power to shareholders in many company law transactions relating to shares or equity capital in the EU.[263] The EU legal capital regime still applies to the extent that the law that governs company law matters is the law of a Member State of the EU.

English company law statutes traditionally have been light on corporate governance rules with the most important rules based on the company's articles of association (section 2.4.10). Company law statutes traditionally have played a greater role in continental Europe.

258 London Stock Exchange, Rules of the London Stock Exchange. Rule Book (effective date 1 July 2019).

259 London Stock Exchange, AIM Rules for Companies (effective 3 January 2018), Part Two – Guidance Notes: "Eligibility for AIM. An AIM company or applicant must be appropriate for AIM's regulatory framework. An AIM company or applicant should usually be a similar structure to a UK plc ... It should not be complex in terms of its structure and securities and should issue primarily ordinary shares (or equivalent)."

260 London Stock Exchange website, AIM Regulatory Landscape – Who's Who: "... A key feature of AIM is the nominated adviser role. Nominated advisers are firms that provide corporate finance advice with particular expertise on AIM and are approved by the Exchange to act for companies that have, or wish to have, their securities admitted to trading on AIM. They will advise and guide the company on its ongoing obligations under the Exchange's AIM rule books. A company admitted to AIM is required to have a nominated adviser at all times whilst it has securities admitted to trading."

261 London Stock Exchange, AIM Rules for Companies (effective 3 January 2018), Part One – AIM Rules, rule 18.

262 See OECD (2015c) p 127, Table 7.4 on differences between admission criteria and continuing obligations for London Stock Exchange's AIM and Main Market.

263 See Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law; Mäntysaari P (2010c) sections 5.3–5.4.

5.4.6 Investment Research

IPOs and secondary trading are more likely to succeed when they are supported by investment research. In the absence of easily available investment research for SME offerings, it would be more difficult for retail investors to participate.

The availability of investment research seems to be unsatisfactory and a problem: "the recent decline in equity research and inactive secondary markets for small cap offerings imply that only those institutional investors that command a special expertise in the relevant industry sector are likely to participate".[264]

In the US, SME equity research was hampered by the SEC's Regulation Fair Disclosure (Regulation FD) of 2000. When an issuer discloses material nonpublic information to certain individuals or entities, the issuer must make public disclosure of that information under Regulation FD. An unintended consequence of this was that "institutions stopped paying a premium" for investment research, which reduced the coverage of many companies.[265]

The availability of SME equity investment research has been reduced in the EU as well. Investment research is regarded as an "ancillary service" under MiFID II.[266] MiFID II requires the separation of all costs and associated charges relating to both investment and ancillary services, including the cost of advice.[267] MiFID II and the Commission's Delegated Regulation[268] require sell side firms to disclose the associated costs and charges to the buy side.[269] Previously, brokers would often bundle research with the fee they charged for executing trades. Designed to reduce spreads in already liquid securities,[270] increase trading volumes in the main markets, and foster the business of large and specialised research firms, this part of the MiFID II regime is widely believed to have

264 OECD (2015c) p 132.

265 Weild D, Kim E, Newport L (2013) p 19.

266 Section B of Annex I to Directive 2014/65/EU (MiFID II).

267 Article 24 of Directive 2014/65/EU (MiFID II). See also recital 72 of Directive 2014/65/EU (MiFID II).

268 Commission Delegated Regulation (EU) 2017/575 of 8 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards concerning the data to be published by execution venues on the quality of execution of transactions.

269 *Ibid.*, recital 11 and Article 5. See also ESMA (2019) Chapter 7 on the interpretation of rules on inducements (research).

270 See recital 62 of Directive 2014/65/EU (MiFID II).

reduced good quality research for the smaller and mid-tier stocks. This in turn may reduce the liquidity of SME markets.[271]

A 2015 OECD study recommended the creation of "a conducive environment for small cap and SME equity research, brokers, sales, ratings and specialised SME banks".[272]

In July 2018, SME equity research was mentioned in the bipartisan JOBS and Investor Confidence Act of 2018 (JOBS Act 3.0). One of the 32 individual bills in JOBS 3.0 was the Improving Investment Research for Small and Emerging Issuers Act. This bill would have required the SEC to carry out a study to evaluate the issues affecting the provision of research coverage for small issuers and pre-IPO companies, including emerging growth companies and other small issuers.

5.4.7 Excursion: Neuer Markt and Scale

What works and what does not work for SME exchanges can be illustrated with earlier experiences from Neuer Markt and the more recent experiences from Scale.

Neuer Markt. Neuer Markt was Deutsche Börse's attempt to create a technology-focused junior market for growth companies without changing the regulation of the established market. Neuer Markt was thus an example of regulatory dualism.[273] The listing requirements were partly designed for small and young high-growth companies,[274] partly stricter than those applicable in the main mar-

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271 PwC (2016) p 6: "A potential unintended side effect on the industry could be the reduction of good quality research for the smaller and mid tier stocks. This could be both because mid tier firms stop producing research, but also because the buy side, who now need to demonstrate value for research being paid for, are less prepared to explicitly make payments for the analysis. This in turn may reduce the liquidity of these markets and lead to a widening of spreads for certain products. This is contrary to the intention of the regulators, who were seeking to tighten spreads with MiFID II to provide better value to end investors." Hannah Murphy, Mifid II impact on small and mid-cap brokers fuels consolidation talk. New European investment research rules trigger sharp drop in commissions. Financial Times, 18 August 2018.

272 OECD (2015c) p 134.

273 For the founding of Neuer Markt, see Plückelmann K (2000). For regulatory dualism see LaPorta R, Lopez-de-Silanes F, Shleifer A, Vishny R (2000) p 22; Gilson RJ, Hansmann H, Pargendler M (2011) p 504.

274 Vitols S, Engelhardt L (2005) pp 5–6; Vitols S (2001) p 556: "One important aspect of the Neuer Markt is the waiver of minimum requirements regarding profitability and age of IPO candidates. A second aspect is the requirement that all listed companies have at least one designated sponsor, i.e. a bank or brokerage house obligated to 'make markets' for their shares."

ket (amtlicher Handel, the Official Market)[275] and intended to be comparable to Nasdaq's requirements.

Neuer Markt grew fast after its opening in 1997 and became Europe's premier segment for high-growth companies.[276] About one-sixth of them were foreign companies.[277]

Neuer Markt did not create the equivalents of Silicon Valley and Nasdaq ecosystems in Germany. Venture capital of the private kind played a much smaller role in Germany.[278] Venture capitalists rarely participated in the governance of Neuer-Markt-listed companies whose governance model tended to be that of a traditional Mittelstand firm.[279] Most German companies listed on Neuer Markt were neither start-ups nor loss-making.[280] Most Neuer-Markt-listed software companies preferred incremental innovation rather than blockbuster products.[281]

Neuer Markt peaked in 2000 and went into a downward spiral. On the surface, the spiral was caused by the bursting of the dotcom bubble[282] and the loss of investors' trust in the market itself following a string of profit warnings, insider dealing investigations, and insolvencies.[283] At a deeper level, it was also caused by Neuer Markt's narrow industry focus on high-tech companies, and bad luck in timing.[284] Moreover, Neuer Markt's standards played a role. Its listing requirements were supposed to be strict, but their enforcement did not convince

275 Gilson RJ, Hansmann H, Pargendler M (2011) p 503; Burghof HP, Hunger A (2003); Vitols S, Engelhardt L (2005) pp 5–6: "Specific features of the Neuer Markt included: • Greater transparency for investors, particularly for smaller 'outsider' investors who did not have intimate access to company management. Companies listing on the Neuer Markt were required to report on a quarterly basis (i.e. more frequently than companies on the main market). Furthermore, international accounting standards (US-GAAP or IAS), which were considered more reliable than the German HGB standards, were to be used; • Liberal listing requirements, which allowed relatively new companies as well as loss-making companies to get a listing; • Increased protection for small shareholders, for example in defining a minimum period of time after the IPO during which inside investors could not sell their shares ('lock-up period'). • Greater liquidity, that is, the ability to buy or sell shares near the current market price, provided though a system of designated sponsors obligated to provide bid-ask market quotes (prices at which the designated sponsor would buy or sell shares)."

276 Vitols S (2001) p 556; Vitols S, Engelhardt L (2005) p 7.

277 Vitols S (2001) p 557.

278 *Ibid.*, p 559.

279 *Ibid.*, p 559.

280 *Ibid.*, p 560.

281 *Ibid.*, p 561.

282 Baums T, Hutter S (2003) p 789.

283 Steil B (2001) pp 343–344; Gilson RJ, Hansmann H, Pargendler M (2011) p 505.

284 Gilson RJ, Hansmann H, Pargendler M (2011) p 507; Vitols S (2001) p 556.

investors.[285] Deutsche Börse decided to improve the standards,[286] but investors' trust could not be restored. Changes in legislation gave Deutsche Börse an incentive to close Neuer Markt.[287] The segment was closed in 2002 with a bad reputation.[288]

Scale. In 2014, MiFID II introduced SME growth markets as a stepping-stone for listings on normal exchanges.[289] According to MiFID II, the SME growth market is a new sub-category within the category MTF.[290] SME growth markets are subject to lighter regulatory requirements.[291] This influenced Deutsche Börse as well.

In 2015, the German government asked Deutsche Börse to create a new exchange segment for start-ups.[292] Deutsche Börse first launched Deutsche Börse Venture Network as a pre-IPO platform for start-ups. In a stakeholder survey, though, it turned out that what was needed was not a segment exclusively for start-ups, but rather a segment for SMEs.[293] What followed was the introduction

285 Deutsche Börse AG (ed) (2001); Shearman & Sterling (2001); Gilson RJ, Hansmann H, Pargendler M (2011) p 506.

286 See Steil B (2001) pp 343 – 344.

287 Baums T, Hutter S (2003) pp 779 – 780; Damrau J (2003) p 342: "Obwohl der Neue Markt das mit Abstand größte an den deutschen Börsen bestehende qualifizierte Handelssegment im Freiverkehr darstellt, sind seine Tage in der jetzigen Form gezählt … Es ist … zu erwarten, dass die Frankfurter Wertpapierbörse das Angebot des Gesetzgebers im Vierten Finanzmarktförderungsgesetz annimmt und den Neuen Markt auf eine gänzlich öffentlich-rechtliche Basis stellt."

288 See, for example, Burghof HP, Hunger A (2003); Vitols S, Engelhardt L (2005) p 8; Gilson RJ, Hansmann H, Pargendler M (2011) pp 505 and 507; Daniel Davies, A scammer's charter for European capital markets. Financial Times, 9 November 2015: "Few things did more long-term damage to the development of an equity investment culture in Europe than the rise and fall of the Neuer Markt."

289 See Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 2.

290 Point 12 of Article 4(1) of Directive 2014/65/EU (MiFID II).

291 Article 33(3) of Directive 2014/65/EU (MiFID II).

292 Deutsche Börse AG (2017); Kröner A, Jones K (2016): "Weil sich viele kleine Firmen in Deutschland bei der Suche nach Kapital aber sehr schwer tun, forderte der damalige Wirtschaftsminister Philipp Rösler (FDP) bereits 2013 eine Wiederbelebung des Neuen Marktes. Sein Nachfolger Gabriel (SPD) machte sich dann für einen Markt 2.0 stark. Ein eigenes Segment für Internet- und Tech-Firmen lehnte die Deutsche Börse jedoch ab, weil es dafür aus ihrer Sicht in Deutschland nicht genügend geeignete Kandidaten gibt."

293 Deutsche Börse AG (2017), interview with Renata Bandov: "In 2015, the German government asked us to create a new exchange segment for start-ups. This prompted us to launch Deutsche Börse Venture Network, a pre-IPO platform on which we successfully connect start-ups with investors from around the world. Late-stage companies within Venture Network were increasingly focusing on finding the right segment for their IPO. However, the Entry Standard, our former

of Scale as a segment on FWB® the Frankfurt Stock Exchange. Scale started on 1 March 2017.

What is Scale? FWB® the Frankfurt Stock Exchange distinguishes between the Regulated Market (under public law) and the Open Market (under private law). The Regulated Market is an organised market for regulatory purposes.[294] In the Regulated Market, an IPO leads to a listing in the General Standard or the Prime Standard. The Prime Standard is a segment subject to additional follow-up duties and thus higher transparency requirements. The blue chip index DAX is limited to the Prime Standard segment. The Open Market (Freiverkehr) is an MTF. Since it is a private-law market for regulatory purposes, it is regarded as an unofficial market regulated by the exchange itself. In the Open Market, a company's securities can be listed on the Quotation Board, the Basic Board, or Scale.

Scale was designed not to repeat the mistakes of Neuer Markt.[295] Scale replaced the Open Market's Entry Standard. "In contrast to the Entry Standard, Scale has higher standards regarding both inclusion and follow-up requirements, and it provides additional new services for issuers".[296] Since 16 December 2019, the Scale segment for SMEs has been registered as an SME Growth Market.

Companies admitted to Scale must have a market capitalisation of at least of €30 million and fulfil requirements relating to turnover, equity capital, annual

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segment in the regulated unofficial market, was no longer attractive, neither to companies nor to investors. We extensively talked to market participants – resulting in more than 200 interviews with companies, investors and banks, as well as with law firms and agencies. The results were unanimous: what we needed was not a segment exclusively for start-ups, but rather a segment for SMEs. In this context, it is crucial to have listing prerequisites which fit the individual target groups. Factors such as visibility, transparency, comparability, liquidity, and investor diversification play an important role. Scale reflects that."

294 Section 2(5) of the WpHG (the German Securities Trading Act).

295 Kröner A, Jones K (2016): "Um eine Skandalserie wie am Neuen Markt zu verhindern, baut die Deutsche Börse dieses Mal eine Reihe von Schutzmechanismen ein: Firmen müssen bestimmte Mindestanforderungen erfüllen, etwa bei Umsatz, Mitarbeitern oder Marktkapitalisierung. Zudem werden sie von zwei Analysehäusern unter die Lupe genommen. Diese werden von der Deutschen Börse bezahlt und nicht von den Unternehmen selbst, um Interessenskonflikte zu verhindern. Darüber hinaus müssen sich die Firmen professionell beraten lassen – etwa durch Investmentbanken, Wirtschaftsprüfer oder Anwaltskanzleien. Diese sollen der Firma vor, während und nach dem Börsengang zur Seite stehen. Vor dem Börsendebüt müssen sie das Unternehmen nicht nur nach wirtschaftlichen, sondern auch nach rechtlichen Gesichtspunkten durchleuchten. So will die Deutsche Börse verhindern, dass sich Betrugsfälle wie am Neuen Markt wiederholen, wo einzelne Firmen Umsätze frei erfunden und ihre Börsekurse damit in die Höhe getrieben hatten."

296 Deutsche Börse AG (2017), interview with Renata Bandov.

profit, or the number of employees. In addition, a Deutsche Börse Capital Market Partner must have conducted a financial and legal due diligence of the issuer and confirmed its suitability for Scale.

We can have a look at some of the admission requirements.

The admission requirements consist of three elements. The applicant must:

- fulfil all key admission conditions (such as a market capitalisation of at least of €30 million),
- fulfil at least three of certain five criteria in addition to the key admission conditions, and
- have a Deutsche Börse Capital Market Partner as a co-applicant.[297]

The key admission conditions are as follows:

- Inclusion documents or, if there is a public offer, a valid and approved prospectus.
- A contract with a supporting Deutsche Börse Capital Market Partner.
- At least two years of company history.
- An estimated minimum market capitalisation of €30 million at the time of the inclusion into trading.
- Par value of at least €1.00.
- Free float of at least 20 % or at least 1 million shares in free float.
- A research report submitted by a research provider.

In addition, the applicant must fulfil at least three of the following five criteria:

- Minimum turnover of €10 million.
- Minimum annual earnings of €0.
- Minimum equity capital of €0.
- Minimum number of employees 20.
- Minimum cumulated equity capital of €5 million before an IPO.

The application is submitted by the issuer and a Deutsche Börse Capital Market Partner as a co-applicant. A Deutsche Börse Capital Market Partner is a bank or a financial service provider. It must have conducted a financial and legal due diligence of the issuer. The co-applicant vouches for the completeness and accuracy of the statements made in the application and for the completeness of the submitted documents.

297 Deutsche Börse AG's website.

In addition to the statutory obligations set out in the Market Abuse Regulation and the German Securities Trading Act, there are ongoing disclosure obligations required by Deutsche Börse AG.[298]

The admission standards clearly exceed the rather open minimum requirements for SME growth markets set out in Article 33(3) of MiFID II.

Some differences between Neuer Markt and Scale. There are interesting differences between these standards and the earlier standards of Neuer Markt.[299] Scale requires:

- a lower free float (20 % v 25 %)
- a shorter track record (two years v three years)
- a higher market capitalisation (€30 million v no requirement)
- a higher minimum equity capital in an IPO (minimum cumulated equity capital of €5 million before an IPO v €1.5 million in net equity capital)
- a lower equity capital without an IPO (€0 v €1.5 million in net equity capital)
- a smaller issuing of new equity (no issuing v at least 50 % of the issuer's value in new equity, aggregated market price of the issue at least €5 million)
- less frequent financial reporting (half-yearly reports v quarterly reports)

The purpose of designated sponsors on Neuer Markt was to ensure the liquidity and tradability of shares. They had a duty to post price indications or spreads continuously. However, many investors expected them to have a bigger role: "At least some investors wanted them to guarantee fair transactions and a good conduct of the firms they were sponsoring."[300] This has been addressed on scale with a bank or financial service provider as a co-applicant.

The cases of Neuer Markt and Scale indicate that an SME exchange should exclude start-ups, should not focus on just one sector such as tech, should add sponsoring or mentoring, and should choose a relatively conservative approach.

Private and public venture capital. Ibrahim distinguishes between private venture capital in the US and other countries' public venture capital such as London's Alternative Investment Market (AIM), Germany's Neuer Markt, and Hong Kong's Growth Enterprise Market. According to Ibrahim, "these exchanges are too small to compare to the United States' Nasdaq, and often supply the first growth capital to startups, making Silicon Valley their apt comparison."[301]

298 Deutsche Börse AG's website.

299 For Neuer Markt, see Harrer H, Erwe P (1998); Vitols S (2001) p 556; Vitols S, Engelhardt L (2005) pp 5–6; Burghof HP, Hunger A (2003); Gilson RJ, Hansmann H, Pargendler M (2011) p 504.

300 Burghof HP, Hunger A (2003).

301 Ibrahim DM (2019) p 1150.

However, as far as Neuer Markt is concerned, the listed companies were not the kind of companies that would raise venture capital in Silicon Valley. One of the things learnt from Neuer Markt was that there is demand for an SME market rather than a "public venture capital" market. Scale is an SME market.

As regards AIM, SPACs that to some extent could be seen as an alternative to private venture capital seem to prefer the Standard segment of the Official List (section 5.5).[302] Since SPAC volumes are much greater in the US, the US is the leading country in private venture capital and public venture capital.

5.4.8 Conclusions

As regards specialised SME exchanges, one can draw several conclusions from past SME exchange design practices.

First, there should not be overreliance on SME exchanges. An SME exchange can benefit firms and early investors by creating a secondary market for shares. It can also work as a stepping stone for some successful companies that later move to the main market.[303]

Second, the SME exchange should avoid a too narrow technology focus. If the exchange focuses on technology firms, market participants' risk exposure is increased due to the exchange's lack of diversification. There can be hype. When the bubble bursts or valuations otherwise become more realistic, investors may lose trust in the market (Neuer Markt).

Third, the SME exchange is not for start-ups. The issuer should have a history before it can be admitted.

Fourth, listing requirements can be kept relatively simple, if the SME exchange is designed as a secondary market only.

Fifth, the admission criteria should make it possible even for loss-making companies to be admitted, provided that they fulfil minimum requirements as to equity capital. Young companies may need to make losses in their early years in order to develop their technology and build up a customer base (Scale).

Sixth, the inherent illiquidity of SME stocks should be addressed. Different market structures can be chosen to increase liquidity: "One-size-fits-all stock market structures harm SME listings, which are typically less liquid than large cap stocks and require broker-dealers to support liquidity, sales and equity re-

302 Norton Rose Fulbright (2021).

303 Claer Barrett, Aim – 20 years of a few winners and many losers: Why has London's junior market performed so poorly? Financial Times, 19 June 2015.

search".[304] One can also use different trading methods to increase liquidity. Early stock exchanges used call auctions. When continuous trading became the norm,[305] continuous trading was applied to trading in SME stocks as well. It was nevertheless complemented by a market maker requirement, a market capitalisation requirement, or both.

Seventh, there should be lock-ins. It is customary to use lock-ins in venture capital and IPOs. The operating practices to preserve market integrity tend to include "a lock-up period for major shareholders around equity offerings".[306] Lock-ins have been used in SME exchange practice as well.

Eighth, there should be a mechanism for the mentoring of SMEs that are contemplating a listing or have just been admitted.

5.5 Direct Listings and SPACs

5.5.1 General Remarks

Direct listings and SPACs have grown in popularity particularly in the US market. While both avenues have been used to increase listings, they work in fundamentally different ways. Direct listings could be described as an incremental improvement for established firms that need no new equity funding. Since no new equity funding is raised, direct listings do not require underwriters. In principle, SPACs could mean a radical change for young operating firms and provide new business opportunities for established financial firms.[307] The use of SPACs simplifies both the issuing of shares to the public and the listing of an operating company. But retail investors' costs are high in SPAC investments and there are regulatory concerns.

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304 OECD (2015c) p 134.

305 Steil B (2001) p 335: "Every exchange in Western and Central Europe is now using the same basic architecture for its primary trading platform: the continuous electronic auction market, where matching buy and sell order are automatically executed by computer."

306 OECD (2015c) p 126.

307 The Economist, Leaders. The real revolution on Wall Street, 6 February 2021: "SPACs are a Silicon Valley rebellion against the cost and rigidity of IPOs."

5.5.2 Direct Listings in the US

In the US, equity issuance to public market investors traditionally has followed the firm commitment process with one or more underwriters.[308] An underwriter requires discounts and commissions.[309] The cost of listings can be reduced by making direct listings easier.

In a pure direct listing, the company does not issue new shares to the public and therefore foregoes the traditional underwriter.[310] The absence of an underwriter can make a direct listing cheaper than an IPO.[311] Moreover, a direct listing does not dilute the holdings of existing shareholders and can be a way to avoid lock-up periods. The downside is higher price volatility when trading opens.[312] This increases risks for investors.[313]

Silicon Valley bankers and lawyers have been lobbying for direct listings as an alternative to IPOs.[314] While underwritten IPOs are still expected to remain attractive,[315] direct listings are regarded as an alternative for cash rich "unicorns".[316] Such companies seek two advantages: the chance to use their own stock as the consideration in mergers and acquisitions, and the chance for employees to maximise the value of their stock options.[317]

The benchmark is the direct listing of Spotify. The intentions of Spotify were described by Barry McCarthy, Spotify's CFO, in a Financial Times article. Spotify

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308 Special Study of Securities Markets (1963a) p 493.

309 *Ibid.*, pp 502–512. See even *ibid.*, pp 501–502 on abuses in pricing. An underwriter may even benefit from the practice of greenshoe that complements the over-allotment of shares. Nelson Smith, The greenshoe option. The Economist, Letters, 29 August 2020.

310 Horton BJ (2019) p 182.

311 *Ibid.*, p 185.

312 Spotify Technology S.A., Form F-1 registration statement filed with the SEC on 28 February 2018, Plan of Distribution: "[U]nlike in an underwritten initial public offering, a DMM in a direct listing may have less information available to it to determine the opening public price of our ordinary shares than a DMM would in an underwritten initial public offering."

313 *Ibid.:* "[T]he public price of our ordinary shares may be more volatile than in an underwritten initial public offering and could, upon listing on the NYSE, decline significantly and rapidly."

314 Miles Kruppa, SEC opens debate on finding alternatives to IPOs. US markets regulator hears arguments for enabling direct listings to raise capital. Financial Times, 17 October 2019.

315 Denenberg AF, Fausten M, Truesdell RD (2019).

316 See Jaffe MD, Rodgers G, Gutierrez H (2018); Coffee JC Jr (2018); Horton BJ (2019); Mark Baker, Direct listings: the future according to Goldman Sachs. Financial Times, 16 October 2019.

317 See Horton BJ (2019); Coffee JC Jr (2018).

did not want: the sale of 15% of the company's market capitalisation at a discount simply to secure a secondary market for the stock; anyone to be subject to a lock-up; hedge funds shorting the stock into the lock-up expiry; or the artificial management of demand and supply that is part of market stabilisation.[318]

The savings seem to come from the fact that a direct listing does not require an underwriter.[319] Interestingly, the savings do not seem to come from reduced SEC registration obligations. We can have a brief look at the registration obligations.

Direct listings and IPOs are partly covered by different registration obligations. They were summed up by Horton as follows: "(1) The Securities Act registration statement (Form S-1) is used when a company is conducting an IPO. (2) The Securities Act registration statement (Form S-1) may also be used when a person receives shares in a private placement and wants to resell them (which, depending on the timing, the SEC may consider a distribution). In this case, it is referred to as a 'resale registration statement' or 'selling shareholder registration statement.' (3) The Exchange Act registration statement (Form 10) is used when a company is listing shares on an exchange pursuant to Section 12(b) of the Exchange Act of 1934 ... (4) A shortened Exchange Act registration statement (Form 8-A) may be used if a company already filed a Securities Act registration statement (Form S-1)."[320] There are particular requirements for the direct listing of foreign securities.[321]

For a pure direct listing, the company thus files a Securities Exchange Act of 1934 registration statement only (Form 10).[322] Form 10 shall be used for registration pursuant to Section 12(b) or (g) of the Exchange Act of classes of securities of issuers for which no other form is prescribed. There is "no inherent statutory obligation to register these shares under the Securities Act of 1933, because the issuer is not making any sale."[323]

318 Mark Baker, Direct listings: the future according to Goldman Sachs. Financial Times, 16 October 2019. For the avoidance of lock-ups or a restricted period, see Jaffe MD, Rodgers G, Gutierrez H (2018) and SEC Release No. 34 – 38067 (Dec. 20, 1996) (Regulation M).

319 Horton BJ (2019) p 191.

320 *Ibid.*, p 190.

321 For the first listing of a Chinese company in New York, see Bergman MS, Borisoff RS, Howson NC (1994).

322 Horton BJ (2019) pp 190 – 191.

323 Coffee JC Jr (2018).

In practice, however, the SEC may have power over issuers to increase requirements.[324] A Securities Act of 1933 registration statement (Form S-1) and a Form 8-A registration statement were used in Spotify's direct listing.

Moreover, banks are still required as advisers. First, issuers that want to do a direct listing may need a financial firm to provide a valuation of the shares to be listed. There is a risk of high first-day price swings in direct listings. A designated market maker would need a valuation of the shares before the opening trade. In an IPO, the cover page of the preliminary prospectus would contain a price range of the anticipated sale price.[325] Second, the NYSE and Nasdaq require an independent, third-party valuation evidencing the market value of publicly held shares. The SEC seems to have made sure that investment banks will be used as advisers when it approved the rule changes of the NYSE and Nasdaq.[326]

5.5.3 SPACs

In the 1970s and 1980s, blank cheque companies (BCCs) emerged in the US penny stock market as a vehicle for future takeovers. Because of fraudulent investment schemes and price manipulation, BCCs were regulated by the Penny Stock Reform Act of 1990. The SEC adopted Rule 419 of the Securities Exchange Act that required BCCs to hold a BCC's securities and gross proceeds from the offering in an escrow or trust account until consummation of an acquisition within a certain period of time.[327]

Described as "direct descendents of the corrupt blank check companies that plagued the securities markets",[328] Special Purpose Acquisition Companies (SPACs) have become a popular form of IPOs in the US in recent years.[329] In fact, the US IPO market largely turned into a SPAC market in 2020—2021. The number of US-listed SPACs was 53% of all US IPOs in 2020 and 75% in January-March

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324 Horton BJ (2019) pp 190 – 191: "While a plain reading of the Exchange Act would seem to indicate that a direct listing could be done relatively simply (by filing a Form 10), the reality is that the SEC used its power over the NYSE to increase what is required. As a result—at least from the perspective of what must be filed—a direct listing is similar to a traditional IPO. The primary differences that remain is that no capital is raised, and that no underwriter is needed."

325 The price range is required by the SEC's rules. See Item 501(b)(3) of Regulation S-K.

326 Horton BJ (2019) pp 200 – 201.

327 For BCCs and the history of SPACs, see Riemer DS (2007); Heyman DK (2007); Schumacher B (2020); Günther D (2021) Chapter A.

328 Riemer DS (2007) p 932.

329 Generally, see Klausner M, Ohlrogge M, Ruan E (2021); Günther D (2021).

2021.[330] This gave The Economist, a newspaper, reason to remark that "[t]heir sudden popularity and the sheer variety of their size, scope and structure raise the question of which SPACs are sensible and which show signs of mania."[331] In the past, SPACs seem to have performed poorly because of the "perverse incentives" of SPAC sponsors.[332] In April 2021, the SPAC market collapsed from the peak level.[333]

There are two main stages in SPAC practice. The first is the SPAC IPO. Since a SPAC is a shell company with no operations, it has little to disclose when it issues shares to investors. This reduces costs.[334] The second stage is when the SPAC acquires an operating company in a business combination. When the operating company wants to go public through a de-SPAC, it negotiates the terms of a business combination with the SPAC's sponsors. The use of a SPAC as an alternative to a traditional IPO is relatively simple and flexible, because the issuing of shares to investors in an IPO is separated from the operating company going public. The SPAC IPO and the business combination essentially are independent of one another.[335]

In the US, the popularity of SPACs is based on the regulatory framework. First, SPAC practices are de facto constrained by Rule 419.[336] Rule 419 applies to blank cheque companies but does not apply to SPACs in the strict legal sense.[337] Market participants comply with much of Rule 419 voluntarily. Voluntary compliance with investor protection rules under Rule 419 has reduced the exposure of SPACs to mandatory regulation, made it possible to differentiate SPACs

330 Data Source: Nasdaq SPAC webpage, citing SPAC Research.

331 The Economist, SPAC invasion, 20 February 2021: "Their sudden popularity and the sheer variety of their size, scope and structure raise the question of which SPACs are sensible and which show signs of mania." See also Ortenca Aliaj and James Fontanella-Khan, Spac share prices slump as enthusiasm wanes. Financial Times, 2 May 2021.

332 Dimitrova L (2017).

333 Miles Kruppa and Ortanca Aliaj, A reckoning for Spacs: will regulators deflate the boom? Financial Times, 4 May 2021.

334 Günther D (2021) p 33.

335 Klausner M, Ohlrogge M, Ruan E (2021); Coates J (2021).

336 Rule 419(b) on an an escrow or trust account. Rule 419(e)(3) on the release of deposited funds and securities. Rule 419(e)(2)(iv) on the period of 18 months. Rule 419(e)(1) on acquisitions representing at least 80 % of the maximum offering proceeds. Rules 419(e)(2)(ii) and 419(e)(2)(iii) on voting on the business combination. Rule 419(e)(2)(iv) on the returning of funds. Rules 419(c), 419(d), and 419(e)(iv) on disclosures.

337 SEC Release No. 34 – 51983 (September 12, 2005) (Amendments to the Penny Stock Rules) and Rule 3a51 – 1(g)(1) stating that a stock is not a penny stock where an issuer that has been in continuous operation for less than three years has net tangible assets in excess of $5 million. Rule 501(a) on a $5 million threshold for "accredited investors".

from blank check offerings under Rule 419 when necessary, and reduced legal risk. Second, SPAC practices are fostered by de facto standardisation, since market participants adapt to the regulatory framework in similar ways. SPAC practices are to some extent different from Rule 419 requirements.[338] Third, SPAC practices are fostered by the beneficial treatment of emerging growth companies under the JOBS Act.[339] The UK Listing Review described the resulting SPAC IPO practices as follows: "SPACs typically file as Emerging Growth Companies using provisions that allow for confidential filings. They also use an exemption to SEC rules for issuers with less than three years of operations who have a minimum of $5 million in net assets. At the point of listing, the SPAC cannot have selected a target acquisition (or it would have to provide disclosure regarding the target)."[340]

Moreover, exchange rules play an important role. SPAC shares used to be traded exclusively on the AMEX and the OTC Bulletin Board. Since 2008, SPAC shares are listed on the NYSE and Nasdaq.[341] Of the three distinctive tiers of the Nasdaq Stock Market, Nasdaq Capital Market has the least stringent initial listing requirements.[342] Since Nasdaq's slightly less stringent listing standards gave it a competitive advantage, the NYSE changed its rules accordingly. Both therefore apply similar rules.[343]

338 See Heyman DK (2007) pp 541–543.

339 For emerging growth companies, see Title I of the JOBS Act.

340 Hill J (2021) section 13.2 pp 82–83. For confidentiality, see SEC Division of Corporation Finance, JOBS Act FAQs: Confidential Submission Process for Emerging Growth Companies (revised December 21, 2015); Latham & Watkins LLP (2020) p 6: "Confidential submission offers a number of advantages: If you decide not to proceed with the IPO past this stage, competitively sensitive information … will not have been made public."

341 Lakicevic M, Shachmurove Y, Vulanovic M (2014). AMEX was acquired by NYSE Euronext in 2008.

342 According to the "Financial and Liquidity Requirements" of Nasdaq Capital Market, companies must meet all of the criteria under at least one of three standards, namely the "Equity Standard", the "Market Value of Listed Securities Standard", or the "Net Income Standard". All require 300 unrestricted round lot shareholders, 1 million unrestricted publicly held shares, and a certain bid price or closing price. Unlike the other standards, the "Market Value of Listed Securities Standard" requires neither operating history nor net income from operations. Instead, the market value of listed securities must be at least $50 million and the market value of unrestricted publicly held shares must be at least $15 million.

343 Hill J (2021) section 13.2.2 pp 83–84; Günther D (2021) p 22; Nasdaq Rule IM-5101–2 and Section 102.06 of NYSE Listed Company Manual.

SPAC IPOs are possible even in Europe. In fact, the regulation of SPACs in Europe is perceived as more flexible than regulation in the US.[344] Of SPACs listed in Europe, most have been listed on the London Stock Exchange.[345] This said, most "European" SPACs were listed in the US in 2020.[346] There is one-way traffic. An overseas listing would make it more difficult for US investors to trade in the SPAC's shares.[347] Generally, many US-listed emerging growth companies are foreign.[348]

In Europe, SPACs took off first in the UK. SPACs are considered cash shells which are not eligible for listing on the Premium segment of the Official List of the London Stock Exchange.[349] The favoured UK listing venue for SPACs is the Standard segment of the Official List with less strict listing requirements. A listing on the AIM market of the LSE would be possible, but SPACs tend to prefer the Standard segment. One of the reasons is the AIM requirement that reverse takeovers must be approved by shareholders and the absence of this requirement on the Standard segment.[350]

Sponsors. SPACs are companies formed to raise capital in an IPO with the purpose of using the proceeds to acquire one or more unspecified businesses or assets to be identified after the IPO.[351] Cash raised through the IPO of the SPAC is placed in trust for a future acquisition. The sponsors of the SPAC will find a target company for a business combination. The successor company is a listed operating company.

A SPAC is founded by sponsors that may range from industry insiders to celebrities. While celebrities commercialise their fame, SPAC IPOs could enable

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344 For example, Ignatyeva E, Rauch C, Wahrenburg M (2013); Schumacher B (2020) p 404: "A notable difference between European SPACs and American SPACs is that European SPACs tend to have more flexible regulations and tend to not subject the management to as many stringent requirements."

345 Günther D (2021) pp 23–25; Ignatyeva E, Rauch *C*, Wahrenburg M (2013).

346 Nikou Asgari and Stephen Morris, European bankers set sights on Amsterdam as regional Spac capital. Financial Times, 17 February 2021; Munter P (2021).

347 Heyman DK (2007) pp 551–552 on AIM as an alternative just before the financial crisis: "[A]lthough a few SPACs have been done on the AIM, large scale movement to that self-regulated market is unlikely … IPO shares may be sold in the U.S. only to qualified institutional buyers, and such shares are not freely tradable by these U.S. buyers on the AIM; they must be held for a period of one year or more under most circumstances."

348 Morrison & Foerster LLP (2017).

349 See Norton Rose Fulbright (2021). See also Hill J (2021) Recommendations overview, p 15, number 10: "Maintain the three-year track record requirement for the premium listing segment."

350 Norton Rose Fulbright (2021).

351 See Layne R, Lenahan B (2018).

well-known industry insiders to benefit from their good reputation and industry knowledge.

Sponsors obtain a "promote". The sponsor promote means greater equity than their cash contribution or commitment would otherwise imply. Since sponsors that are industry insiders control both the SPAC IPO and negotiate the terms of the business combination, they can ensure favourable terms. Sponsors could end up with a 20% stake in the SPAC, meaning 25% of the IPO proceeds.[352] However, their promote is at risk. In the US, the sponsor promote is forfeited and the SPAC liquidates in the absence of a business combination within a period of two years.[353]

Sponsors' incentives create conflicts of interest. If a business combination deal is made, the 20% share of the founders becomes very valuable. If the SPAC liquidates without having completed an acquisition, the shares and warrants owned by the sponsors end up worthless.[354] Sponsors therefore have strong incentives to make a deal regardless of whether it is good or bad for other investors.[355]

Sponsors' incentives have contributed to poor SPAC performance in the past. A study found "strong evidence that much of SPAC value destruction through bad acquisitions is a result of certain contractual features that give SPAC managers incentives to pursue any acquisition over no acquisition."[356] According to the study, performance is worse with increasing SPAC sponsors' ownership, when deals are completed just before the contractually specified deadline for a SPAC acquisition, or when the deal just barely meets the contractually specified minimum transaction value.[357]

Since SPACs usually are founded by industry insiders, sponsors may have conflicts of interest in their other capacities.[358] For example, a SPAC may be founded by a private equity firm that manages other people's money and raises income in two capacities. On one hand, it looks for a profitable exit as the manager of a private equity fund. On the other, it looks for a takeover target as a SPAC

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352 Dimitrova L (2017) p 102; Norton Rose Fulbright (2021); Klausner M, Ohlrogge M, Ruan E (2021).

353 Coates J (2021).

354 Dimitrova L (2017) p 102.

355 "If you put a gun to my head and said you have to buy a business in two years, I'd buy one but it wouldn't be much of one." Warren Buffett according to Eric Platt, Warren Buffett sees 'significant' inflation amid 'red hot' US recovery. Financial Times. 2 May 2021.

356 Dimitrova L (2017) p 99.

357 *Ibid.*, pp 99–100.

358 Norton Rose Fulbright (2021).

sponsor that has unilaterally chosen its own sponsor promote. This increases their liability risks under securities law.[359] In the US, the separation of the SPAC IPO and the de-SPAC business combination means that the de-SPAC business combination does not benefit from the safe harbour under the Private Securities Litigation Reform Act.[360]

Underwriters. In a SPAC IPO, securities are sold to investors through a conventional underwriting. Underwriters earn fees. Millstream Acquisition Corp., the first modern SPAC that went public in 2003 after the dotcom bubble, was an invention of its underwriter, the investment bank EarlyBirdCapital. SPACs have been described as "fee-driven".[361] According to a law firm, the typical underwriting fee for a SPAC in the US is 5.5% of the IPO proceeds, with 2% paid in cash at the closing of the IPO and 3.5% paid when the business combination closes. In the London market, a typical underwriting fee is around 2–3% on the proceeds from shares in the IPO, excluding those subscribed for by the sponsor, payable on completion of the IPO. In the Frankfurt and Amsterdam markets, underwriting fees are between US and London levels.[362] According to a study, SPAC performance is worse when SPAC IPO underwriter fees are deferred and paid upon a SPAC's successful merger completion.[363]

Investors. There must be investors. In a SPAC IPO, redeemable shares are primarily sold for cash to hedge funds and other institutions. Initial investors also commonly obtain warrants to buy additional stock at a fixed price.[364]

For investors, the SPAC is a blank check.[365] Investors rely on the reputation of SPAC sponsors. But investors participate for various reasons and rely on the reputation of SPAC sponsors in different ways.

359 Coates J (2021): "Indeed, in some ways, liability risks for those involved are higher, not lower, than in conventional IPOs, due in particular to the potential conflicts of interest in the SPAC structure ... SPAC sponsors and targets should already be hearing from their legal, accounting, and financial advisors that a de-SPAC transaction gives no one a free pass for material misstatements or omissions."

360 *Ibid.*

361 "I call it fee-driven buying. In other words, they're not buying because it's a good investment. They're buying it because the adviser gets a fee. And of course, the more of that you get, the sillier your civilisation is getting." Charlie Munger according to Eric Platt, Warren Buffett sees 'significant' inflation amid 'red hot' US recovery. Financial Times. 2 May 2021.

362 Freshfields Bruckhaus Deringer LLP (2021). See also Heyman DK (2007) p 546: "For the investment banks, the lure of the SPAC is simply that it generates a healthy fee." For the evolution of fees, see Lakicevic M, Shachmurove Y, Vulanovic M (2014).

363 Dimitrova L (2017) pp 99–100.

364 Heyman DK (2007) p 548; Coates J (2021).

365 For the difference between a "blank cheque" and a "blind pool" offering, see Heyman DK (2007) p 534.

First, investors may turn to SPACs because of the lack of alternatives: "There is no magic to it … There's just a lot of money out there looking for a home."[366] According to a law firm, "SPACs are particularly attractive to financial institutions looking to deploy capital in the current climate due to the combination of the low interest rate environment and high market valuations."[367]

Second, early investors often redeem or sell their shares around the time of the business combination.[368] They may therefore try to profit from later investors' scarce investment alternatives and later investors' reliance on the reputation of SPAC sponsors. Later investors buy shares in the aftermarket or participate in a new offering by the combined entity in the course of the de-SPAC.

Third, SPACs could allow investors to co-invest with sponsors perceived as having the requisite industry knowledge and expertise.[369]

Fourth, SPACs could enable some investors to participate at an earlier stage than would have been possible otherwise. The SPAC route could open up early-stage investing and private placements in growth companies for retail investors.[370] A traditional operating-company-IPO would mean a later-stage investment for retail investors.

Fifth, SPACs could provide a functional equivalent to the pooling of private investments. This is because of the separation of the SPAC IPO (in which investments are made in a takeover vehicle) and the de-SPAC (in which the vehicle uses the monies to fund a private investment). While many wealthy investors already can make investments in private equity or venture capital funds whose managers choose portfolio companies, a SPAC IPO can enable even retail investors to participate in acquisitions.[371] This said, SPACs and de-SPACs cannot be seen as a functional alternative to private equity or venture capital from the perspective of retail investors and the operating company. The de-SPAC transaction will be structured in a different way (private equity takeovers are leveraged buyouts), the ancillary services of sponsors and fund managers are different (venture capital fund managers provide important ancillary services to portfolio companies), and the incentives of fund managers and SPAC sponsors are different (fund managers are remunerated on the basis of managed capital and returns).

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366 An unnamed banker. Arash Massoudi and Ortenca Aliaj, 'Blank-cheque' blitz: Michael Klein leads Wall St charge into Spacs. Financial Times, 21 July 2020.

367 Norton Rose Fulbright (2021).

368 Coates J (2021).

369 Norton Rose Fulbright (2021).

370 Heyman DK (2007) pp 548 – 549.

371 *Ibid.*

Investors' costs are indirectly increased by underwriting fees payable by the SPAC. They are directly increased by the sponsor promote that may substantially dilute their share ownership.[372] Moreover, their share ownership may be diluted when the de-SPAC business combination is preceded by a PIPE, when the shareholders of the operating company are allocated a large share of the combined entity in the course of the de-SPAC, and when shares are allocated as an incentive to the managers of the combined entity.

Operating company. After the SPAC IPO, sponsors try to find an operating company for the de-SPAC. For operating privately-held companies, SPACs are marketed as an alternative to an IPO.[373] The functional alternative to an IPO is the de-SPAC process that leads to a business combination.[374]

A de-SPAC business combination can bring several benefits to the operating privately-held company and/or its shareholders.[375] First, listing through a business combination with a SPAC is a quick and simple way to a public listing. Second, SPACs are perceived as attractive buyers due to the private negotiation of terms, price certainty, and the potential for higher valuations.[376] Third, SPACs could help SMEs that either have no access to a traditional IPO or to venture capital. After the dotcom boom, they helped young growth firms.[377] They might now be used to help fund the development of technologies that require long-term investment.[378] Fourth, foreign companies have used SPACs to obtain a listing in the US.[379]

372 Klausner M, Ohlrogge M, Ruan E (2021).
373 Arash Massoudi and Ortenca Aliaj, 'Blank-cheque' blitz: Michael Klein leads Wall St charge into Spacs. Financial Times, 21 July 2020 citing Anu Aiyengar, co-head of global M&A for JPMorgan Chase: "'Spacs are reaching out to pre-IPO companies and saying they should view this as a safer way to go public and a credible alternative to an IPO'." See also James Fonatella-Khan, Ortenca Aliaj and Sara Germano, Liverpool FC owner looks at stock market listing. Financial Times, 10 October 2020.
374 For example, a de-SPAC business combination was used by the lorry start-up Nikola. First there was VectoIQ Acquisition, a blank check company. VectoIQ raised $200 million in a May 2018 IPO and was listed on the Nasdaq under the symbol VTIQ. This SPAC focused on the smart transportation industry. In March 2020, it agreed to merge with Nikola Corp at an implied enterprise value of about $3.3 billion, having secured a $525 million private placement led by Fidelity. On 4 June 2020, the company began trading on the Nasdaq under its new ticker NKLA. See The Economist, Partying like it's 1999, 22 August 2020.
375 Heyman DK (2007) p 547.
376 Norton Rose Fulbright (2021).
377 Günther D (2021) p 14.
378 The Economist, Rain for the rainmakers: The SPAC craze will change tech investing, 20 February 2020.
379 Heyman DK (2007) p 551.

Further participants include the managers of the operating company. It is not unusual to use share-based management incentives. In this way, managers of the operating company are given a financial incentive to make the business combination happen.[380]

Convergence of practices. According to a law firm, US and European markets use the same basic SPAC structures. In the US, Amsterdam (Euronext) and Frankfurt (Deutsche Börse) markets, "investors buy units consisting of shares and a fraction of a warrant, the sponsor obtains a near-free promote and contributes some at-risk capital, the IPO proceeds go into trust, the SPAC has up to 24 months to find an acquisition target in a specified sector, SPAC shareholders must approve the business combination, and SPAC shareholders have the right to redeem their shares at the time of the business combination".[381]

In continental Europe, the model is US SPACs. Neither EU company law nor Member States' company laws seem to prevent the adoption of similar practices.[382]

A law firm identified some differences between US SPACs and UK SPACs at the time of the initial business combination.[383] They relate to the following issues: the decision rights of shareholders; the suspension of trading; shareholders' redemption rights; limits on the market value of the initial business combination; and the underwriting fee.

In the US, shareholder approval usually is required to approve the acquisition,[384] but since no shareholder approval is required in the case of an issuer listed on the Standard segment in the UK, an acquisition by a UK SPAC can be closed more quickly. In the US, shareholders of the SPAC typically are granted redemption rights.[385] The UK Listing Review recommended the introduction of redemption rights.[386] Under both the NYSE and Nasdaq rules, the SPAC must complete one or more business combinations that have a fair market value equal to at least 80 % of the trust account at the time of the initial business combination,[387] but there are no such requirements in the UK. In the US, it is customary to use a deferred underwriting fee, with a portion of the fee paid at the clos-

380 Günther D (2021) p 20.
381 Freshfields Bruckhaus Deringer LLP (2021). For a more detailed description of the life-cycle of the SPAC, see Klausner M, Ohlrogge M, Ruan E (2021).
382 Freshfields Bruckhaus Deringer LLP (2021).
383 Norton Rose Fulbright (2021).
384 See also Hill J (2021) section 13.2.2 p 84.
385 *Ibid*.
386 *Ibid*., Recommendations overview, p 12, number 6.
387 See also *ibid*., section 13.2.2 p 83.

ing of the IPO and the remainder deferred until the closing of the initial acquisition. Moreover, the ongoing listing requirements and annual and periodic filing requirements are considered to be more burdensome for US-listed companies than for companies listed on the Standard segment or AIM.

There could be some differences between US SPACs and European SPACs. European SPAC practices are influenced by existing EU law in the Member States or, in the post-Brexit UK, national law that still reflects the legacy of its past EU membership. For example, board practices could be influenced by the choice of company form and company law.[388] We can have a brief look at particular aspects of SPACs from a European perspective.

Particular aspects from a European perspective. A SPAC is a shell company.[389] It is not a fund. But it could be seen at least as a functional equivalent to a "collective investment undertaking". The question therefore is whether a SPAC can fall within the scope of the Alternative Investment Fund Managers Directive (AIFMD). The answer may depend on whether the SPAC is regarded as a "collective investment undertaking",[390] whether it is regarded as having a "defined investment policy" for the benefit of its investors,[391] or whether it is regarded as having a "general commercial or industrial purpose".[392] The SPAC's investment strategy is described in its IPO prospectus or admission document.

Generally, SPAC practices are constrained by the applicable company laws, securities laws, and laws governing financial services. In the absence of any particular SPAC rules in EU law, SPACs are regulated on a piece-meal basis under existing EU law. The legal framework varies depending on the Member State.

The founders may choose where to incorporate the SPAC. For example, a SPAC listed on the Frankfurt Stock Exchange can be incorporated in another country such as Luxembourg and benefit from the flexibility of Luxembourg company law.[393] Moreover, the founders may choose the company form. For example, Dutch SPACs can be listed as Dutch NVs (which customarily are used for listed companies) or BVs (which customarily are used for privately-held companies). This increases the flexibility of the Dutch legal framework for SPACs.[394] Generally, the choice of the country of incorporation and the company form is

388 See even Freshfields Bruckhaus Deringer LLP (2021).
389 SEC Division of Corporation Finance, Staff Statement on Select Issues Pertaining to Special Purpose Acquisition Companies (March 31, 2021).
390 Point (a) of Article 4(1) of Directive 2011/61/EU (AIFMD).
391 Point (a)(1) of Article 4(1) of Directive 2011/61/EU (AIFMD).
392 See ESMA, Guidelines on key concepts of the AIFMD, ESMA/2013/611, 13 August 2013.
393 In the EU, Article 54 of the TFEU applies.
394 Freshfields Bruckhaus Deringer LLP (2021).

a commercial decision. The choice must ensure flexibility in the light of the fact that the country and form of the future business combination are still unknown. For US SPACs, the preferred jurisdictions include British Virgin Islands, New York, and Delaware. Incorporation in the UK or Luxembourg or the choice of an SE have been popular in the EU.[395]

The legal framework will also depend on exchange rules. An exchange applies its general rules as default rules with certain exceptions for SPACs. This can be illustrated with the Frankfurt Stock Exchange and the Nordic markets of Nasdaq.

Before a company's shares are eligible for admission on the Frankfurt Stock Exchange, the company "must have existed as a company for at least three years and have disclosed its financial statements for the three financial years preceding the application" under the general rules.[396] But as this usually is not the case with a SPAC, Deutsche Börse will allow the shares to be admitted, "if it is in the interest of the issuer and the public to do so".[397] This reflects the provisions of the Listing Directive.[398] The management board of Deutsche Börse will use its discretion when making the decision.[399] For this reason, SPACs can be listed on the Regulated Market of the Frankfurt Stock Exchange (General Standard and Prime Standard).

As regards Nasdaq's Nordic main markets, there are similar exceptions. The customary admission requirements regarding historical financial information, business operations, and operating history are not applicable, because the SPAC in many aspects will be an empty shell with very limited business operations at the time of listing. Other than this, the customary listing process applies.[400] The prospectus requirement is based on the Prospectus Regulation,

395 Günther D (2021) p 32.

396 Deutsche Börse website, referring to section 3(1) BörsZulV.

397 Deutsche Börse website, referring to section 3(2) BörsZulV.

398 Article 44 of Directive 2001/34/EC (Listing Directive).

399 Deutsche Börse website: "For the admission of SPACs, the Frankfurt Stock Exchange has hitherto exercised its discretion in individual cases and decided in favour of admission to the Regulated Market if all of the following conditions were met: The proceeds of the issue is paid into an interest-bearing escrow account. The intended use of the proceeds of the issue is detailed in the prospectus. The SPAC provides evidence that its existence will be limited to a fixed period of time and that in the event of its liquidation, the assets in the escrow account will be returned to the investors, and it is ensured that the use of the assets in trust is decided with a shareholder majority of at least 50 per cent."

400 Nasdaq Nordic Main Market Q&A on SPAC listings: Questions and Answers on the admission requirements, the admission process and disclosure requirements for SPAC:s and the Business Combination. Version 3. Last update: 3 March 2021.

but Nasdaq recommends the publication of more extensive information.[401] One may note that there is an EU Growth Prospectus for SMEs.[402]

There are requirements as to the distribution of shares to the public (free float requirements). In the EU, a 25% free float rule for issuers that seek admission of securities for trading on a regulated market is based on the Listing Directive and to some extent MiFID II.[403] The UK Listing Review recommended lowering the free float requirement from 25% to 15% as the earlier requirement was not regarded as necessary to ensure liquidity. On the NYSE and Nasdaq, liquidity is ensured by requiring a number of round lot shareholders upon listing and after listing.[404] But on Nasdaq's Nordic markets, the European 25% rule applies.[405]

The main ways to protect investors include constraints on the use of assets, various mechanisms that make it easier for investors to get their money back, bankruptcy remoteness, sponsors, and the right of investors to vote on the business combination.

In SPAC practice, the use of monies raised through the SPAC IPO is limited to the business combination. Monies will be returned to investors unless a business combination is completed within the specified timeframe, that is, in the absence of timely "de-SPACing". Unless shareholders grant an extension, the SPAC will be

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401 *Ibid*., section 2.4: "The Exchange deems transparency in relation to the areas listed below to be important for investors to ensure fair and orderly trading and a reliable price formation process of the Share of the SPAC. Thus, the Exchange expects the Issuer to include detailed information on each area listed below in the Prospectus. · The objective, timeline and purpose of the SPAC. · The redemption process and terms. · Information on the sponsor, the sponsor's strategy and the reasoning behind the sponsor's decision to sponsor the SPAC (including information about any fees or other rewards to the sponsor and/or other setups of beneficial nature for the sponsor)."

402 Article 15 of Regulation 2017/1129 (Prospectus Regulation) on the preferential treatment of SMEs and the EU Growth Prospectus.

403 Article 48 of Directive 2001/34/EC (Listing Directive); Article 51 of Directive 2014/65/EU (MiFID II); Article 2 of Commission Delegated Regulation (EU) 2017/568 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards for the admission of financial instruments to trading on regulated markets.

404 Hill J (2021) section 2.3 and Chapter 9; SEC Release No. 34 – 90245 (October 22, 2020) (The Nasdaq Stock Market LLC; Notice of Filing of Proposed Rule Change), I: "Nasdaq's listing requirements include a number of criteria designed to ensure that a listed security has adequate liquidity … Among these is the requirement for a company to have a minimum number of publicly held shares, market value of publicly held shares and round lot holders in order to list a security on the Exchange."

405 Nasdaq (2021) section 2.3: "The SPAC should, as a general rule, satisfy the 25% free float requirement …"

liquidated and investors reimbursed at the IPO offering price and before the founders.[406]

On one hand, the timeframe and the potential right to get the money back create a cap that reduces investors' risks in relation to their capital investment. On the other, they also increase the risk of poor returns, since the liquidation of the SPAC will not create a profit. The risk exposure of an individual investor is increased by the right of each shareholder to vote on the business combination. The timeframe, investors' rights, and sponsors' own exposure may also give sponsors incentives to "proceed with the acquisition of a less than ideal target company or on less than optimal terms".[407] For this reason, the inherent quality of sponsors should be paramount for investors.

In SPAC practice, the initial investment that covers operational costs and initial business combination costs is provided by sponsors. It is complemented by interest earned on the monies raised.[408] The securities of founders typically are locked-up for a certain period of time following the initial acquisition in order to better align the interests of sponsors with those of investors and to reduce investors' perceived risk exposure. Moreover, founders customarily serve as board members of the SPAC.[409] In relation to investors, sponsors thus provide important services.

For their services, sponsors are rewarded with a block of shares the size of which exceeds their share of the capital investment. Sponsors might invest about 2.5 % of the funds held by the SPAC. The sponsor promote might be up to 20 % of the SPAC's share capital and voting rights.[410] In the EU, the sponsors would need to take into account the existence of mandatory bid rules under the governing law.[411]

To ensure that monies can be repaid to investors, they must be kept separate from the assets of sponsors and the other assets of the SPAC and must only be released for purposes of the completion of the initial business combination or, failing that, the liquidation of the SPAC. In common law countries, monies raised through the SPAC IPO can be held in a trust account or in escrow. In the US, "90 per cent of the gross proceeds raised during the IPO must immediately be depos-

406 Winston & Strawn LLP (2021).
407 Norton Rose Fulbright (2021).
408 *Ibid.*; Günther D (2021) p 31.
409 Norton Rose Fulbright (2021).
410 Freshfields Bruckhaus Deringer LLP (2021); Winston & Strawn LLP (2021).
411 See, for example, Article 5(1) of Directive 2004/25/EC (Directive on takeover bids).

ited and held in a trust account and are subject to strict investment criteria".[412] An escrow account is used in civil law countries.[413]

Moreover, it is customary to use both shares and warrants.[414] In SPAC practice, the securities offered in the IPO are units that consist of a common share (that is, an ordinary share) and a warrant to common shares. Warrants grant investors the right to acquire additional shares of the company at a specified point in the future at the warrant strike price.[415] All warrants are issued to shareholders as part of the unit when the IPO closes. In Amsterdam, part of the warrants have been issued to shareholders when the de-SPAC business combination closes.[416] Shares and warrants can be traded separately after listing. The use of warrants means that investors pay less money up front and less money needs to be repaid to investors in the event that the business combination will not happen. Moreover, they are protected against dilution where the warrants may not be exercised before the business combination.[417]

To ensure that monies are repaid to investors before they are repaid to sponsors, sponsors subscribe for preferred shares (also known as "founder shares") and warrants that give a right to common shares. When the initial business combination is completed, their preferred shares are converted into common shares.[418] To reward sponsors, founder shares entitle founders to additional benefits.[419]

Before the initial business combination, investors can sell the SPAC's listed stocks and warrants. After the initial business combination, they may sell their shares. Depending on the governing law, investors may have a right to ask for a share buyback at the IPO offering price or a right of redemption where investors do not wish to support the proposed initial business combination. Interests in the SPAC therefore are relatively liquid securities.[420]

The founders try to find a target for the business combination. Since acquisitions can take many forms, the acquisition process must depend on the case. If

412 Hill J (2021) section 13.2.2 p 83.

413 Freshfields Bruckhaus Deringer LLP (2021).

414 See, for example, Coates J, Munter P (2021); Freshfields Bruckhaus Deringer LLP (2021).

415 Norton Rose Fulbright (2021): "usually a 15 per cent mark-up of the IPO share price".

416 Freshfields Bruckhaus Deringer LLP (2021).

417 Heyman DK (2007) p 542.

418 Winston & Strawn LLP (2021).

419 Norton Rose Fulbright (2021): "Founder shares typically entitle founders to a certain percentage of the upside in the value of the company following the acquisition, usually 20 per cent, once the share price reaches a certain hurdle for a designated number of consecutive trading days, typically set at 15 per cent above the IPO price."

420 Winston & Strawn LLP (2021); Norton Rose Fulbright (2021).

the target is large, the acquisition will be a reverse takeover. The SPAC might even take on additional debt or raise additional equity through a private investment in public equity (PIPE) to fund the acquisition. Equity financing may have a dilutive effect on existing shareholders.[421]

It is customary to require shareholder approval for the proposed business combination. In the EU, this would in practice be required by provisions of company law implementing Directive (EU) 2017/1132.[422] Shareholders' voting rights in business combinations largely reflect the European legal capital regime.[423] In the US, Rule 419 ensured that the process of making an acquisition could not be done hastily. Rule 419 requires the approval of 80 % of the shareholders. At the same time, it gives shareholders a right of rescission.[424] The required shareholder approval has sometimes meant that investors have blocked a deal they have not liked and got their money back. For example, the SPAC market was wiped out when this happened during the financial crisis of 2007–2009.[425]

Moreover, shareholder approval may be a requirement under the applicable listing rules. For example, there is an AIM requirement that reverse takeovers must be approved by shareholders but no such requirement for companies with a listing on the Standard segment.[426]

In SPAC practice, shareholders may have redemption rights in the context of the business combination. Whether they may ask for the redemption of their shares may or may not depend on whether they have voted against the business combination.[427] In Europe, there are statutory company law constraints on the redemption of shares.[428] The legal capital regime will generally influence the choice of the country of incorporation and the company form. For example, German founders might choose to incorporate an SE in Luxembourg.[429]

SPACs may acquire more than one target. There is a target size restriction in the US but not in Europe. In the US, the initial business combination must be

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421 Norton Rose Fulbright (2021).

422 See, for example, Articles 68(1) and 93(1) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

423 Mäntysaari P (2010c) sections 5.3 – 5.4.

424 Riemer DS (2007) p 943.

425 Heyman DK (2007) p 550; Günther D (2021) p 15.

426 Norton Rose Fulbright (2021).

427 Freshfields Bruckhaus Deringer LLP (2021).

428 See Articles 78 and 82 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

429 Günther D (2021) p 26: "Eine Gründung in einer deutschen Rechtsform ist bislang noch nicht erfolgt und steht de lege lata in Konflikt mit dem Kapitalaufbringungs- und Kapitalerhaltungsvorschriften und der strengen Kompetenzverteilung in der AG."

with one or more businesses having an aggregate fair market value of at least 80 percent of the value of the SPAC's trust account.[430] There is no 80% rule in Frankfurt, Amsterdam or London.[431]

In the UK, a rule regarding trading suspension following the identification by the SPAC of an acquisition target is seen as a key deterrent for potential investors: "It exposes investors to the possibility that they will be 'locked into' their investment for an uncertain period … even if they wish to exit – due to differences of view over the target or for other reasons."[432]

5.5.4 Conclusions

Experiences with direct listings and SPACs show that there are ways to reduce operating companies' listing costs through incremental improvement and radical innovation. Direct listings cut costs by cutting out the underwriters. SPACs are a way to simplify regulatory compliance by a new middlemen. The issuing of shares to the public is simple, because the issuer is an empty shell and has little to report. The raising of capital by the operating company and listing its shares are simple, because the operating company negotiates a reverse takeover or another business combination directly with the SPAC's sponsors. However, retail investors have lost money in SPAC IPOs in the past.

Both direct listings and de-SPACs can increase the number of operating companies with publicly-traded shares. Direct listings are less problematic for retail investors. While SPAC IPOs seem to be a poor deal for retail investors, increasing the number of companies with publicly-traded shares through de-SPAC business combinations is in the interests of retail investors.

5.6 Retail Investor Empowerment through Social Media and Broker-Dealer Competition

5.6.1 General Remarks

Retail investors' access to trading has been improved by the emergence of low-cost online brokerage platforms. Their access to information has been improved

430 Hill J (2021) section 13.2.2 p 83; Freshfields Bruckhaus Deringer LLP (2021).
431 Freshfields Bruckhaus Deringer LLP (2021).
432 Hill J (2021) section 2.4 p 30.

by social media. Both are in the process of changing stock markets. The current trends can be illustrated with the GameStop case (section 5.6.2) and the integration of social media and trading (section 5.6.3).

5.6.2 The GameStop Case

The GameStop case started when some Reddit traders discussed the undervaluation of GameStop in the US stock market. They believed that it was possible to play against short-selling hedge funds by buying GameStop stocks and call options. Retail investors typically buy "naked" call options, that is, call options without a hedge.[433]

In January 2021, the Reddit message board and its r/WallStreetBets community had managed to put GameStop in the limelight. There was a buying spree that sparked a "short squeeze".[434] Significant volumes of unhedged call options generally force marketmakers to buy up shares in the underlying stocks, creating a positive feedback loop.[435] This is what happened in the GameStop case as well.

The case raised questions about market manipulation[436] and the role of broker-dealers. Broker-dealers were affected because of clearinghouse requirements. Since the settlement date was T+2, trades stayed on the books of the broker. The clearinghouse therefore required a significant amount of capital from the brokers. To cope, Robinhood and other platforms decided to halt buy orders and leveraged trading in so-called "meme stocks".[437] Without Robinhood investors' ability to purchase additional shares of GameStop, WallStreetBets could not continue with the short squeeze and the stock price collapsed.

The GameStop case indicated that retail investors can have a voice. The case was perceived as "a game stopper". Because of this new kind of phenomenon, the House Financial Services Committee held a hearing dubbed "Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide".

433 The Economist, Techtonic shifts, 12 September 2020.

434 Ian Smith and Robin Wigglesworth, GameStop's wild ride: how Reddit traders sparked a 'short squeeze'. Financial Times, 29 January 2021; Bautz JF (2021).

435 The Economist, Techtonic shifts, 12 September 2020.

436 SEC, Statement of Acting Chair Lee and Commissioners Peirce, Roisman, and Crenshaw Regarding Recent Market Volatility (January 29, 2021). See also Bautz JF (2021); Napps EA (2021); Smerznak I (2021). For predatory trading in financial economics, see Brunnermeier MK, Pedersen LH (2005).

437 Bautz JF (2021); Napps EA (2021); Smerznak I (2021).

Moreover, the GameStop case highlighted the existence of four important stock market trends. They relate to the earnings logic of broker-dealers, access to foreign stocks, the design of trading platforms, and access to useful information.

Retail-oriented brokerage firms have eliminated their own commissions and account minimums in the US.[438] This has made investments easier for various categories of retail investors. In the US, retail brokerage firms can offer zero-commission trades and other benefits to customers, because most of them receive payments for order flow from market makers. With payment for order flow, market makers can provide a rebate for executed orders.[439] The SEC has permitted payment for order flow since 1994.[440] There can be even other ways to offer zero-commission trading. For example, eToro earns trading revenue like a classic broker from the spread, and non-trading revenue. Traders can bring in revenue in many ways.[441]

The GameStop phenomenon spread across the globe. Some other companies turned into meme stocks. This was made possible by the fact that retail investors in many countries had access to trading in both domestic and foreign shares through online brokerage firms and new retail trading platforms. It has been common wisdom to assume that high transaction costs associated with direct purchases of overseas securities make this option impractical for many small investors (section 6.4.7).[442] But high transaction costs do not seem to have been an issue in GameStop.

The user interface of new retail trading platforms can be designed with young retail investors in mind. In his 2021 testimony to Congress, the CEO of Robinhood described the company's approach to design as follows: "At Robin-

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438 Tenev V (2021), IV.

439 *Ibid.*, V. See also The Economist, Pay-per trade, 6 February 2021.

440 Tenev V (2021), V footnote 12 citing Exchange Act Release No. 34 – 34902, 1994 WL 587790 (Oct. 27, 1994) (Payment for Order Flow) and Exchange Act Release No. 34 – 43590, 2000 WL 1721163 (Nov. 17, 2000) (Disclosure of Order Execution and Routing Practices).

441 SEC Form 8-K, Current Report Pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, Fintech Acquisition Corp. V, March 16, 2021, Exhibit 99.1, Investor Presentation, dated March 16, 2021: "-Trading revenue. The trading revenue includes the spread, which is the difference between the Buy and Sell prices of a certain asset, and it is charged when a new trade is opened. Trading revenues derived from equities, crypto and contracts for difference. -Interest income. Margined positions to stay open overnight incur a small fee, releative to the value of the position. This is essentially an interest payment to cover the cost of the margin used overnight. -Currency conversion and other income." Filippo Ucchino, How does eToro make money? Here's the answer. Investingoal, Last Updated: January 2021.

442 See Simons K (1999); SEC (2016a).

hood, we pride ourselves on providing access to commission-free investing through an appealing, simple platform. But even though we have made investing easier, we recognize it is not a game. While I am not aware of any agreed upon definition of 'gamification,' I do know that Robinhood Financial designed its app to appeal to a new generation of investors who are more comfortable trading on smartphones than speaking with a broker, and Robinhood has built it to include features that, based on our outreach and research, customers feel familiar with and expect to see in a mobile product. The mobile app provides the intuitive experience customers want, while also providing them with tools and information to learn about investing and keep tabs on their finances. I am confident that the easy-to-use interface enables customers to understand, control, and direct their finances in a responsible way."[443]

The fourth trend seems to be the education of customers complemented by peer-to-peer social media as a source of investment information. The CEO of Robinhood stressed the company's focus on financial literacy. This required avoiding complex industry language and providing useful tools to inform customers.[444] An investor nevertheless told in his testimony to the Congress that "people didn't really care about boring, repetitive analysis of GameStop and other stocks" and that the Reddit stream made it possible to "analyze events in real-time and keep each other honest". He said that markets are hard to understand regardless of information: "Here's the thing: I've had a bit of experience and even I barely understand these matters. It's alarming how little we know about the inner-workings of the market ..."[445]

5.6.3 Social Media Platforms

Social media played a role in the GameStop case of 2021. We can have a brief look at social media platforms to understand market trends.

Platforms are the most successful business model in digital economy. While platforms have for a long time played a central role in finance as a way to reduce transaction costs, social media is emerging as a new platform for retail finance.

443 Tenev V (2021), VI.
444 *Ibid.*, VII.
445 Gill KP (2021).

Social media platforms are used by billions of people in the world. Obviously, many people use social media for investment purposes. Platforms facilitate "social finance" as they help beliefs, sentiments, and preferences to spread.[446] General social media can be used for the dissemination of information for investment purposes (such as Reddit). In addition, there are specialised social media platforms for the sharing of ideas and information about investments (such as Stocktwits, Scutify, or eToro's Open Book).[447]

Because of the large number of users, social media platforms can even benefit issuers. Issuers have followed the crowd and started to use social media platforms for disclosure purposes. In April 2013, the SEC made clear that companies may use social media outlets like Facebook and Twitter to announce key information in compliance with Regulation Fair Disclosure (Regulation FD).[448] Unlike traditional disclosure channels, social media is a form of pushing information to the public rather than members of the public pulling information.[449]

Traders can analyse the sentiment in social media. Algorithms based on social media play an important role in automated short-term trading of financial instruments.[450] Social media has made it easier to manipulate markets.[451] For example, social media has benefited pump-und-dump schemes. Potential market manipulation was an issue in the GameStop case.

While social media creates a virtual trading floor for various kinds of propositions where the prevailing beliefs crystallise in a vague market sentiment, the trades based on the market sentiment will be executed on a trading platform. Where legal, a social media platform could provide a platform for trade execution as well. For example, eToro is a fintech firm that started by offering online trading in high-risk contracts for difference and extended into social trading.[452] eToro has paid users depending on the size of their following. Other social media platforms that allow users to trade include Collective2 and Voleo.

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446 For "social finance", see Bursztyn L, Ederer F, Ferman B, Yuchtman N (2014); Hirshleifer DA (2015); Han B, Hirshleifer DA, Walden J (2019); The Economist, Free exchange. Regression to the memes, 27 February 2021.

447 Pan W, Altshuler Y, Pentland A (2012).

448 So long as investors have been alerted about which social media will be used to disseminate such information. SEC Release No. 34 – 69279 (April 2, 2013).

449 Paul T (2015).

450 Cremonesi P, Pagano R, Francalanci C, Mazzoni L, Elahi M, Polipoli A, Maggioni A (2018).

451 See, for example, Article 12(1)(c) and recital 48 of Regulation 596/2014 (Market Abuse Regulation).

452 For social trading, see Pan W, Altshuler Y, Pentland A (2012).

5.7 The Structure and Composition of the Board

5.7.1 General Remarks

The theory and practice of corporate governance and the existence of numerous corporate governance codes in the world suggest that certain organisational structures of listed companies are regarded as superior to others. Mainstream corporate governance theory tends to focus on the structure and composition of the board, the duties of the board, the relationship between the board and shareholders, the relationship between the board and the CEO, as well as incentives. Mainstream theory is based on shareholder primacy and the choice of fictive shareholders as the principal.

In contrast, our theory of corporate governance is based on the choice of the firm as the principal (section 2.3.3). The firm relies on board members and real-life shareholders as its agents. This shows the phenomenon of corporate governance in a new light.

In any case, the most basic issues in mainstream theory and practice include the choice between the one-tier board and the two-tier board and the choice of board composition. We can have a brief look at these practices.

5.7.2 Choice Between the One-Tier or Two-Tier Board

There are many board models in the world. It would be more useful to focus on the separation of functions (section 2.4.5) than speculate about the contents of the notion of "a board" or, even worse, "the board" (section 2.4.10).[453] Because of the very rich legal literature on boards, it is sufficient to focus on just some main points.

In the context of corporate governance, there are particular issues that must be addressed one way or another (section 2.3.3).[454]

For example, it is necessary to organise collective decision-making and allocate power, risk, and information between company bodies.[455] To ensure that the corporate governance model is self-enforcing,[456] it is necessary to allocate the

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453 For a survey on empirical literature, see Adams RB, Hermalin BE, Weisbach MS (2010).
454 For corporate governance issues, see Mäntysaari P (2005) pp 17 and 30 – 31; Mäntysaari P (2010a) pp 166 – 167; Mäntysaari P (2012) p 103.
455 For the allocation of power, risk, and information in corporate governance, see Mäntysaari P (2005) pp 30 – 33; Mäntysaari P (2010a) pp 167 – 168; Mäntysaari P (2012) pp 103 – 104.
456 See Mäntysaari P (2012) Chapter 8.

functions of management and monitoring, that is, the functions of the initiation, control, enforcement, and monitoring of decisions, to separate bodies.[457]

These functions have been allocated in various ways in company law and corporate practice depending on the country and the company form. The composition of any corporate body should depend on its function. Mandatory provisions of law and path dependency have played an important role.

Board models. Corporate governance discourse customarily focuses on the governance of large listed companies. It is customary to distinguish between the two-tier board (dual board) and the one-tier board (unitary or single board).

The two-tier board makes it possible to separate different functions at board level. The two-tier board was developed for large companies in Germany and France (section 2.4.5). To improve monitoring under the two-tier board model, the monitoring function can be made independent from the management function by ensuring that the two boards share neither members nor functions, and by ensuring that the monitoring board monitors the managing board rather than management.

The one-tier board traditionally is used in common law countries (section 2.4.5). In Anglo-American corporate practice, it has been customary to vest all powers in the board and give the board discretion to delegate powers and functions to individual directors or sub-board bodies. This has caused an obvious problem: Who monitors the monitors?

The who-monitors-the-monitors problem under the one-tier model has partly been addressed by creating two-tier structures to increase the separation of monitoring and management. It has been customary to allocate a limited monitoring role to external board members and board committees with external ("independent") members as monitors of executive members.[458] In the absence of statutory two-tier structures for large companies, such practices have been driven by corporate governance codes. The personal "independence" of external board members has been important under the one-tier model. The Sarbanes-Oxley Act was a move towards creating two-tier structures inside a one-tier board.[459] The financial crisis of 2007–2009 made regulators pay more attention to the separation of monitoring and management in large banks.[460]

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457 Fama EF, Jensen MC (1983a); Fama EF, Jensen MC (1983b).

458 Mäntysaari P (2005) section 6.5.3; Hopt KJ (2019b) p 517.

459 Mäntysaari P (2005) section 6.5.3. See even Yamanaka T (2018) on "one-board and three-committee companies" and "one-board and one-committee companies" as functional equivalents to "two-board companies" in Japan.

460 Basel Committee on Banking Supervision (2015).

Generally, such new corporate governance practices are necessary under the one-tier model to cure problems that in a German AG largely have been addressed by the strict two-tier model. The two-tier model focuses on the independence of the monitoring function.[461]

Few legal scholars have argued for two-tier boards in the US.[462] The absence of a clear separation of monitoring and management under the one-tier board model was not perceived as very problematic before the financial crisis of 2007–2009.[463] In fact, Anglo-American corporate governance studies tend to rank corporate governance in the US and common law countries as superior to the rest of the world.

Attempts to address the who-monitors-the-monitors problem include increasing reliance on shareholders. Under the one-tier board model, shareholders are expected to act as monitors of the board. Since retail investors have neither resources nor incentives to monitor management, institutional investors have in recent regulatory practice been given a monitoring role.[464] This reflects shareholder primacy with board members and managers as shareholders' "agents" under common law, neoclassical economic theory, or both. Monitoring costs form part of shareholders' "agency costs".

The two-tier board and the one-tier board are not the only board models in the world. In the Nordic countries, it is customary to use a third model that consists of concentrated share ownership, a statutory board with large powers, and a statutory CEO responsible for operative management.[465] Most large firms have a sub-board management group chaired by the CEO and consting of top execu-

461 See, for example, Mäntysaari P (2005) section 6.5.3. See also Hopt KJ (2019b) pp 533–534: "Bemerkenswert ist … wie zögerlich die Forderung nach independent directors in Deutschland aufgenommen wurde. Im Aktiengesetz gibt es keine Definition der Unabhängigkeit für Aufsichtsratsmitglieder, und es gibt nur spärliche Regelungen dazu … Erst der Entwurf für eine Kodexreform für 2018 beinhalte eine Definition und eine ausführliche Liste von Kriterien für die Einschätzung der Unabhängigkeit seiner Mitglieder durch den Aufsichtsrat."

462 See, for example, Dallas LL (1997). Generally, see Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 366.

463 See, for example, Davies P (2001).

464 See, for example, Jiang F, Kim KA (2015) p 192: "Because individual investors in China are, for the most part, uninformed speculators, the Chinese government has increasingly promoted the presence and growth of institutional investors, hoping that they will bring stability, activism, and oversight to the stock markets." See also Directive 2017/828/EU (SRD II); Hopt KJ (2019a) II.3(c): "Whether the hopes placed on better corporate governance by shareholders are justified remains to be seen."

465 Hansen JL (2007); Lekvall P (ed) (2014).

tives. Since this group is not recognised in company law, its members are in the legal sense employees.

A fourth model is used in China. The Chinese corporate governance system consists of overlapping organisations that belong to the corporate sphere, the state, or the Communist Party of China (CPC). A listed firm in China has a corporate organisation. It must have a board of supervisors and a board of directors. The board of directors makes major decisions and monitors top managers. The primary responsibilities of the board of supervisors are to supervise and evaluate directors and senior managers.[466] In addition, there is state organisation. State-owned enterprises (SOEs) are overseen by the powerful State-owned Assets Supervision and Administration Commission (SASAC).[467] China is run by the CPC and companies are no exception. Each director or supervisor who is a member of the CPC must obey the orders of the Party. The board model can thus be described as a two-tier or three-tier structure, but to understand the nature of corporate governance in China, it is necessary to take into account state and Party organisations as well.

Limited convergence. Because of fundamental differences in company law and board traditions in Europe, Member States' laws on board structure and composition have not been harmonised in the EU (section 2.4.10). Each country applies its own provisions of company law to regulate these issues.

There is some convergence towards the US corporate governance model. Increasing institutional share ownership, the Americanisation of business research and education, the agency theory, and the Americanisation of advisory services and business practices have contributed to the increasing reception of US corporate governance practices in Europe.[468]

Convergence is hampered by path dependency. Path dependency is increased by the nature of company law as a matrix (section 2.3.3), the key design principle (section 2.4.16), and the goal of the coherence of the legal framework. There is perhaps more convergence in academic discourse and business culture than in the letter of the law.

Convergence is not one-way traffic but seems to work in both directions (section 2.4.13). For example, corporate scandals such as Enron led to the Sarbanes-Oxley Act (SOX) in the US. SOX was a move from state company law to federal company law and better separation of monitoring and management in public

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466 Jiang F, Kim KA (2015) pp 193 – 194. For corporate governance in China, see Milhaupt CJ (2017).

467 Jiang F, Kim KA (2015) p 195.

468 André T Jr (1998); Fiss PC, Zajac EJ (2004); Kieser A (2004); von Hein (2008) p 376.

limited-liability companies. The financial crisis of 2007–2009 made regulators pay more attention to the separation of monitoring and management in large banks.[469] In the absence of a two-tier model, two-tier structures are created inside the one-tier board with external members as monitors of executive members.[470] Moreover, problems caused by shareholder primacy have increased interest in continental European corporate governance practices.

Choice. Generally, different kinds of firms may need different kinds of organisational structures, company forms, and boards (for venture capital board practices, see section 5.3).[471] Where firms may choose between the two-tier board and the one-tier board according to their needs (such as a management-friendliness or financial monitoring),[472] one could expect the board model not to affect firm value very much. You simply need different tools for different tasks: any carpenter would tell you that a saw is not superior to a hammer as such.

For example, France has since 1966 permitted public companies to adopt either a unitary or two-tier board and to reverse the decision over the company's life cycle. A study found little evidence for any widespread effect of board structure on firm value in French public companies.[473]

The same study found evidence of how the characteristics of the firm influence the structure of the board in closely-held firms. When there is a founder or, in family firms, a first-generation CEO, a closely-held firm is significantly more likely to adopt a unitary board structure.[474] Professional management or management by a subsequent generation at a closely-held firm increases the likelihood of a two-tier board structure.[475] Among closely-held firms with a unitary board structure, firms with professional managers tend to split the leadership positions (président and directeur general). Firms controlled by the founder or

469 Basel Committee on Banking Supervision (2015).
470 Mäntysaari P (2005) section 6.5.3; Hopt KJ (2019b) p 517.
471 Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 376: "Overall, the evidence supports the view that firm characteristics have an important influence on board structure and the intensity of monitoring."
472 Adams RB, Ferreira D (2007) argued that management-friendly boards can be optimal. Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 365: "Our results for two-tier boards indicate the usefulness of the Adams and Ferreira (2007) framework which suggests that a friendly board may often be the appropriate form of governance, but for certain firms a two-tier board structure that fosters greater monitoring could be more appropriate." See also Mäntysaari P (2010a) pp 174–175; Mäntysaari P (2012) pp 108–109, 137 and 145.
473 Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 365. See also Hopt KJ (2019b) p 522.
474 Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 376.
475 *Ibid.*, p 376.

a member of the first generation tend to unify the positions (Président Directeur Général, PDG).[476]

In the EU, firms have some discretion when choosing the board model. First, the national company laws of each Member State can provide for alternative company forms. There is thus built-in flexibility in Member States' national company laws. Second, there is a European company form. The SE is a European public limited-liability company form with either a one-tier board or a two-tier board.[477] An SE may be founded in any Member State and is governed by the law of the Member State in which it has its registered office. There is perhaps no great demand for the additional flexibility provided by the SE in the light of the fact that few large firms choose the SE as their main company form.[478] Third, firms established in the EU may use the national company forms of any Member State under freedom of establishment.[479] In EU company law, the regulation of boards has not been harmonised due to fundamental differences between Member States' laws.

In US corporate practice, the board model is fixed by the founders. The reaction to the irrevocable nature of the corporate charter (*Dartmouth College*) is to vest all powers in the board.

5.7.3 Board Composition

There are many studies on the effect of board composition on "firm value" in listed companies. Such studies must start with the notion of "firm value" and the choice of dependent variables. According to traditional finance literature, firm value can be measured as stock market performance, accounting performance, or a mix of both performance measures.[480]

According to mainstream theory, important elements of good corporate governance include board independence, management share ownership, and blockholding.[481] First, good corporate governance is assumed to require independent

476 *Ibid.*, p 378.
477 Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE).
478 There is no central registry of SEs in Europe. The European Trade Union Institute (ETUI) has its own database of registered SEs. See also Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 367.
479 See, for example, C-212/97 Centros [1999] ECR I-1459; Mäntysaari P (2010a) section 4.4.4.
480 See Jentsch V (2019) section 3.1.1 pp 214 – 215.
481 Jentsch V (2019) p 203.

board members and the separation of the roles of the CEO and the chairman of the board. Second, good corporate governance is assumed to require management share ownership in order to align managers' interests with the interests of shareholders and to reduce agency costs.[482] Third, large shareholders are assumed to be efficient monitors.

However, board composition probably should depend on the function of the board, the board model, the characteristics of the firm, the characteristics of the market (that is, the firm's business), and regulatory compliance (that is, the preferences of the state). If this is true, it is likely to reduce the usefulness of studies that find a connection between board composition and firm value.[483] This can be illustrated with a recent article by Jentsch.[484]

In a 2019 article, Jentsch studied the effect of board composition on firm value in large listed companies in Switzerland. Jentsch pointed out that earlier empirical evidence on the effectiveness of the traditional elements of what is perceived as good corporate governance is mixed at best.[485]

According to the 2019 article, firm value is decreased when the share of independent board members is increased or when the significant shareholders are institutional investors. Firm value is increased when board members include current or former executives, when the chairman has executive functions, or when the CEO sits on the board. Jentsch made various proposals based on these results. They included, for example: the appointment of a majority of independent directors rather than a supermajority; permitting the representatives of significant shareholders to act as "enhanced-independence" directors; permitting a combined CEO and chairman role; vesting stronger minority rights in shareholders; and making the controlling shareholder subject to a duty of loyalty in relation to the company and/or public shareholders.

Using the 2019 article as a basis of discussion, the results could be interpreted in other ways. It would be important to distinguish between the independence of individual board members and the independence of the monitoring function, and between shareholders that are good or bad providers of ancillary services.

482 Jensen MC, Meckling WH (1976).

483 See Bhagat S, Black BS (1999) on the weak empirical support for boards with a majority of independent members and Bebchuk LA, Hamdani A (2017) p 1274: "[T]he existing arrangements for electing directors undermine the effectiveness of independent director oversight … [I]ndependent directors currently relied upon to contain controllers' conflicts cannot be expected to be effective guardians of public investors' interests."

484 Jentsch V (2019).

485 For a survey, see Adams RB, Hermalin BE, Weisbach MS (2010).

First, decisions taken by so-called independent directors cannot generally be expected to be better than decisions taken by executive or non-independent directors. Decisions tend to be of better quality when they are based on better information. In a listed company, executive or non-independent directors and former CEOs tend to know the firm very well. Independent directors tend to be less knowledgeable about the firm.[486] To signal their own competence and neutralise the problem with asymmetric information, independent directors may in their monitoring role need to rely more on standard practices such as financial incentive schemes. This is likely to increase CEO pay.[487] The quality of independent but less knowledgeable directors' decision-making would hardly be improved by creating a new class of even more independent ("enhanced-independence") board members even more accountable to public shareholders than their standard-independent peers.[488] A better alternative could be to ensure, on one hand, the participation of professional and specialised corporate insiders in corporate functions and, on the other, the independence of the monitoring function through structural measures such as the use of a two-tier board, the separation of work, specialisation, and mixed monitoring. The monitoring function needs knowledgeable and competent people regardless of whether they are "independent" or not.

Second, it is probably better to have a chairman who knows the firm well than a chairman who does not. Most chairmen of the top 20 global companies by market capitalisation are knowledgeable because they are not independent in their personal capacity.[489] Founders, controlling shareholders, long-time board members or former CEOs know the company very well.

Third, institutional investors may not be good monitors in the long term. Institutional investors typically invest other people's money and diversify other people's investments. Their own risk exposure is very limited and their own interests are not aligned with the long-term interests of the firm.[490] When institu-

486 See even Bhagat S, Black BS (1999); Brickley JA, Coles JL, Jarrell G (1997).
487 See Adams RB, Hermalin BE, Weisbach MS (2010) p 70 on Hermalin's model.
488 Enhanced-independence directors were proposed by Bebchuk LA, Hamdani A (2017).
489 Tom Braithwaite, Who cares about independent chairs? Financial Times, 5 February 2021.
490 See, for example, Shleifer A, Vishny R (1986) pp 463 – 463: "We expect that financial managers and especially individual and corporate investors would monitor the management and sometimes initiate a takeover or invite third parties to do so. Indeed, our preliminary evidence suggests that large shareholders play an important role in takeovers. Even when they cannot monitor the management themselves, large shareholders can facilitate third-party takeovers by splitting the large gains on their own shares with the bidder."

tional investors have made investments in a fund managed by a fund management company, the monitoring function is delegated to the fund management company.[491] Voting and ownership are separated in fund portfolio companies ("empty voting").[492] Fund management companies and institutional investors can reduce their own operational costs by outsourcing monitoring to proxy-advisory firms. The use of proxy-advisory firms reduces proximity to portfolio companies. These practices have had serious effects on corporate governance. One of the things learnt after the financial crisis of 2007–2009 was that institutional investors were poor monitors of banks. For these reasons, empowering institutional investors or representatives of fund management companies at board level would hardly be the right way to foster the long-term interests of the firm. Neither would it be meaningful to increase institutional investors' company law rights as minority shareholders.

Fourth, where the company has an individual as a controlling shareholder, the company tends to be controlled by a knowledgeable person regardless of the controlling shareholder's formal position in the company. For example, Tesla is controlled by Elon Musk regardless of whether he is or is not the chairman.

Fifth, the existence of good controlling shareholders can improve the overall services of shareholders and reduce their cost. The future of the firm can depend on the quality of controlling shareholders. This is the case both in growth firms and established firms.[493] Controlling shareholders generally have access to better information about the firm. Where the private benefits of controlling shareholders are aligned with the interests of the firm, private benefits can reduce the cost of their services to the firm.[494] For example, the existence of a large long-term block-holder will protect an established firm against hostile bids and reduce the need to pay for other structural takeover defences (such as the need to distribute funds to shareholders in order to increase leverage and share price).[495] Moreover, there is a positive correlation between ownership concentration and R&D expenditures.[496] The extreme case is the business model of tech start-

491 Jensen MC (1989): "Institutional investors delegate the job of being active monitors to agents best qualified to play the role."
492 Hu HTC, Black BS (2006a); Hu HTC, Black BS (2006b); Hu HTC, Black BS (2007).
493 See Bebchuk LA, Hamdani A (2017) p 1279 on publicly-traded companies. See also Thomsen S (1996); Schroeder D, Thomsen S (2021) on foundation ownership and economic performance.
494 Mäntysaari P (2010a) section 9.2.6 p 218 and section 9.4.2 pp 274–275.
495 Mäntysaari P (2010a) section 9.4.2; Mäntysaari P (2010c) Chapter 18.
496 See Mäntysaari P (2012) section 9.4.4 p 136.

ups. Such firms tend to have one or more controlling shareholders that are founders or venture capital investors.[497] In such firms, good controlling shareholders are expected to focus on the burn rate and fast growth. This makes traditional accounting "firm value" irrelevant but is intended to increase the valuation of the firm in each funding round.

5.7.4 Guidelines on Corporate Governance Principles for Banks

The most detailed global framework of design principles for boards applies to banks. In 2015, Basel Committee on Banking Supervision issued authoritative guidelines on corporate governance principles for banks.[498] They have had an impact on the principles and guidelines of other international and national supervisory institutions. In the EU, they have influenced the Capital Requirements Directive (CRD IV) and the Solvency II Directive.[499] Most of the principles focus on the board.

The detailed design principles reflect at least four higher-level design principles. The first is ensuring "banks' safety and soundness" or "the safe and sound functioning of a bank".[500] The second is ensuring the sustainability of banks especially in relation to their stakeholders.[501] Third, among banks' stakeholders, shareholders' interest is secondary to depositors' interest.[502] Fourth, it is assumed that there must be a board as the body that supervises management. The board is defined neutrally, because the guidelines are designed to be applied in many jurisdictions worldwide.[503]

The rejection of shareholder primacy and the recognition of depositors' interests should not really change the interest of the bank-firm for its own long-term survival. Neither should they change the function of shareholders as agents of the bank-firm and the need for good ancillary services. But the guidelines should change the non-recognition of the interests of the bank-firm and practices

497 When Bebchuk LA, Hamdani A (2017) pp 1279 – 1280 described abuses by controlling shareholders, they seem to have had large traditional listed corporations, the mainstream principal-agent theory, and the financial business model in mind. Little of this describes the business model of modern growth firms.

498 Basel Committee on Banking Supervision (2015).

499 See Hopt KJ (2021) pp 19 – 20.

500 Basel Committee on Banking Supervision (2015) paragraphs 1 and 5.

501 *Ibid*., paragraph 2.

502 *Ibid*., paragraph 2.

503 *Ibid*., Glossary, definition of "board of directors, board".

designed to align the interests of board members and managers with those of shareholders under the now rejected shareholder primacy. What the guidelines should not mean is replacing shareholder primacy with equally narrow-minded "creditor governance". The long-term survival of the bank-firm in competitive markets requires much more than making sure that depositors do not lose their money.[504] Banks that just focus on depositors not losing their money could soon be replaced by central banks that are planning to launch their own digital currencies. Shortly put, the guidelines do not make it necessary to have creditors sitting on the board.[505]

Since the guidelines are applied in many jurisdictions, the guidelines are not based on a strict separation of the supervision and management functions at individual level. There may be both executive and non-executive board members.[506] In the absence of the strict separation of supervision and management functions, the guidelines address the individual and collective quality of board members (Principle 2), how the board structures itself (Principle 3), and senior management (Principle 4).

According to the guidelines, board members owe a "duty of care" and a "duty of loyalty" to the bank under the applicable law.[507] Both have been defined in the guidelines.[508] The duty of care means the duty of board members to "decide and act on an informed and prudent basis with respect to the bank". According to the guidelines, it is often "interpreted as requiring board members to approach the affairs of the company the same way that a 'prudent person' would approach his or her own affairs". The duty of loyalty means the duty of board members to "act in good faith in the interest of the company". According to the guidelines, this duty "should prevent individual board members from acting in their own interest, or the interest of another individual or group, at the expense of the company and shareholders".

The guidelines do not discuss whether such general duties are owed by senior management. This reflects that fact that sub-board senior management ei-

504 For a slightly different view, see Hopt KJ (2021) p 22: "This position is a clear rejection of the shareholder primacy view … Creditor governance is not just a question of the purpose of bank corporations, instead having consequences in many other areas regarding the corporate governance of banks. In particular this view reduces also the relative importance of controlling shareholders, institutional investors and shareholder control in general, as is presently the center of attention in the corporate governance of (non-bank) corporations."

505 For the opposite view, see Hopt KJ (2021) p 24.

506 Basel Committee on Banking Supervision (2015) Glossary, definition of "executive director" and "independent director", paragraphs 18 and 47.

507 *Ibid.*, paragraph 25.

508 *Ibid.*, Glossary.

ther does or does not fall within the scope of company law depending, in particular, on whether the applicable law reflects the one-tier or two-tier board model. Members of senior management nevertheless have duties according to the guidelines. The individuals that belong to senior management are responsible for "the sound and prudent day-to-day management of the bank". They are accountable to the board.[509] According to the guidelines, senior management should be directed by board policies and personal incentives when managing the bank's activities.[510]

While the guidelines stress the importance of corporate and risk culture,[511] corporate culture is weakened by the fundamentally different treatment of the ethical duties of the board and senior management. While board members owe a "duty of care" and a "duty of loyalty" to the bank, the individuals that form senior management are not expected to be motivated by such duties owed to the bank. Under the guidelines, their expected standards of behaviour should be designed to reflect how the cultural values of the bank are put into practice by the board through board policies and incentive systems. There could be overreliance on decisions of the board as regards creating an internal culture and the "tone at the top"[512] if members of senior management are expected to be guided by their own personal benefits.[513]

5.7.5 Conclusions

There are many alternative board models. While the perceived quality of a board model can depend on the chosen theory, the quality of a board model for any particular firm depends on the characteristics of the firm. Firms are different. If firms may choose the structure and composition of the board according to their own needs, rational firms may end up with different board models. If this happens, the effect of any particular board model on overall economic performance is neutralised. Regulators should therefore ensure that companies may use different board models.

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509 *Ibid.*, paragraph 87.

510 *Ibid.*, Principle 4: "Under the direction and oversight of the board, senior management should carry out and manage the bank's activities in a manner consistent with the business strategy, risk appetite, remuneration and other policies approved by the board."

511 See, for example, *ibid.*, paragraphs 3, 11, 14, 26, 29–30, 40, 46, 76, 91, 93, 162 and 164.

512 For the "tone at the top, see *ibid.*, paragraphs 14, 30, 91 and 162.

513 See *ibid.*, paragraphs 143 and 148.

5.8 General Conclusions Based on Current Market Practices

We can draw several general conclusion from current market practices. Low IPO levels and greater financial inequalities are the result of many powerful trends and seem to have become permanent. The existing regulatory framework can be improved, but it may take radical innovation to increase the number of companies with publicly-traded shares and retail investors' direct share ownership.

Company law, stock exchange law, securities law. It is necessary to improve company law, stock exchange law and securities law.

Angel funding and venture capital practices indicate that market regulation should make it easy for firms to take steps from early-stage funding to later-stage funding. A secondary market for shares can support the primary market.

If there is a new exchange or segment for small companies, it should be an exchange or segment for SMEs rather than start-ups. It is necessary to address the inherent illiquidity of SME shares by admission requirements, the principles of the matching of bids, and market making. Moreover, mentoring may be necessary in order to prevent a market for lemons. The LTSE model indicates that there may be room for innovative ways to reduce costs.

Operating firms prefer discretion to choose the terms of their own public listing. The raising of funding can be separated from the public listing. IPOs may not be necessary for funding purposes. A privately-held company can avoid or postpone an IPO by raising funding privately. An IPO can be replaced by a direct listing or a de-SPAC business combination. It may not be necessary for a publicly-traded company to raise cash from its shareholders. A publicly-traded company can use its shares as a means of payment in mergers and acquisitions, and it can avoid rights issues when it raises cash through PIPEs. A public listing can primarily be seen as a way to create secondary trading for shares and a way to enable business combinations. To increase the number of companies with publicly-traded shares, stock exchanges for small growth firms should primarily be designed as secondary markets. It is easier to organise stock exchanges as secondary markets than primary markets.

Traditional issuer disclosures do not work if few investors can follow and understand them. Regulators should beware of overreliance on traditional disclosures. Issuers' mandatory disclosure obligations should be reduced if they reduce IPO levels and the number of companies with publicly-traded shares without improving the welfare of retail investors as a class.

Fund and SPAC practices indicate that it is customary to separate investments by market investors and the raising of funding by operating companies through the use of intermediaries that pool investments. When making such investments, retail investors require little voice. Instead, they rely on regulatory

compliance and the expertise of professionals. Retail investors do not need increased minority rights for monitoring purposes. Increased minority rights might reduce their investment opportunities, because retail investors will get no chance to invest in stocks in the first place unless it is in the interests of issuer-firms and/or their controlling shareholders.

The practices of angel investors and SPAC practices could to some extent be used as a model for regulating the rights of retail investors. Angel investors protect their rights in later funding rounds and exits. While SPAC shareholders are not guaranteed any particular rights in the operating company in advance, they have the rights of holders of common stock in the SPAC, may vote on the business combination with the operating company, and may exit the SPAC.

To increase the viability of the business project and to reduce the risk exposure of new investors, it could be useful to ensure that founders and key shareholders are committed to the project for a certain number of years. This requires lock-ins. However, lock-ins may be less necessary in a direct listing or SPAC business combination.

The board model can depend on the share ownership and control structure. On one hand, monitoring and management in a company that has a dispersed share ownership structure could be improved by the use of two-tier boards. On the other, there are companies in which share ownership, management, and monitoring are not separated. There is no clear separation of share ownership and management in entrepreneur-managed operating companies or companies with a controlling shareholder. To protect firms with a dispersed share ownership structure and to bring more entrepreneur-managed companies and companies controlled by a controlling shareholders to public markets, the firm should be able to choose between alternative board models.

Access to trading in foreign stocks seems to have been improved by new online trading platforms and broker-dealer competition. However, access to trading in foreign stocks does not seem to have had any major impact on the overall number of companies with publicly-traded shares.

A better legal environment for start-ups. Company law, stock exchange law, and securities law may not be enough to increase the number of companies with publicly-traded shares. To address the concentration of economy, the business of start-ups and young growth firms should be embedded in a better legal environment.[514] The rules of the game should be made to work for young firms.

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514 Rose P, Solomon SD (2016) p 127: "Put another way, the primary issue is not how to get companies to market, which may merely create a false supply, but how to create a regulatory and market environment that fosters growth in small companies." The role of the broader regulatory framework can be seen in the failure of European company forms. Ghetti R (2018) p 835.

For example, bankruptcy laws, non-compete obligations for employees, and competition laws can hamper new entrepreneurial ventures. We can have a brief look at these examples.

First, from the perspective of the potential entrepreneur, stringent bankruptcy laws are discouraging because they add to the perceived cost of starting a business. Moreover, the personal liability of board members can lead to boards that are either too risk averse (when board members understand the risk they are taking) or clueless (when board members are uncritical of risk taking).[515]

US bankruptcy law favours entrepreneurship. In the US, bankruptcies are governed by federal law under the Bankruptcy Code. The benefits of the Bankruptcy Code are not limited to debt restructuring under Chapter 11.[516] Chapter 7 of the Bankruptcy Code gives honest individual debtors a fresh start by discharging them of debt.

European insolvency systems vary widely across the Member States. The most important benefit of a common bankruptcy system for the Member States of the EU would perhaps not be connected to cross-border transactions. It would be far more important to get rid of national systems that favour banks and hamper entrepreneurial risk-taking by preventing the discharge of debt. The Directive on restructuring and insolvency[517] adopted in 2019 is a step in the right direction. The purpose of the Directive is to give entrepreneurs a second chance.

Second, it is important for local tech start-ups and growth firms to be able to recruit talent globally. For example, Silicon Valley has a high share of foreign-born population. In the core age group in computer and mathematical occupations, 70.5 % of Silicon Valley employees were foreign born in 2017.[518] France has created a special tech visa to make it easier for the tech sector to import talent.[519]

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515 Finch V (2002) p 542.

516 For Chapter 11, see, for example, Gilson SC (2012).

517 Directive (EU) 2019/1023 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on procedures concerning restructuring, insolvency and discharge of debt.

518 Age group 25 – 44. San Mateo and Santa Clara Counties. Source: Joint Venture Silicon Valley & Institute for Regional Studies, 2019 Silicon Valley Index.

519 Harriet Agnew, Paris overtakes Berlin for tech start-ups after boost from Macron, Financial Times, 25 October 2019: “Two-and-a-half years on, the country’s tech ecosystem appears to be benefiting from measures including the scrapping of a wealth tax on all assets other than property, a flat tax on dividends and an easier process to wind down companies. The most important change, according to the French tech industry, was the creation of a special tech visa, making it easier for the sector to import talent.”

Third, non-compete clauses in employment contracts can hamper new ventures. California is a good example of what can happen when the use of non-compete clauses is restricted.

In California, employees are relatively free to find a new job or found a business. The use of non-compete obligations to bind employees to their employer has been restricted since the California Civil Code of 1872[520] and is still restricted under California Business and Professions Code.[521]

Californian law protects the property rights of the employee: "Every individual possesses as a form of property, the right to pursue any calling, business or profession he may choose. A former employee has the right to engage in a competitive business for himself and to enter into competition with his former employer, even for the business of those who had formerly been the customers of his former employer, provided such competition is fairly and legally conducted."[522]

In other words, the interests of the employee to find a better job or found a business are regarded as more important than the interests of the current employer.[523] These rights have been very important for both start-ups and employees. Start-ups have been able to recruit the best employees and employees have been able to earn high wages.[524]

Fourth, the concentration of business can create a kill zone around tech giants and other large firms. Competition law and industrial policy should be adapted to digital economy to ensure that there is room for young firms.

High-level policy objectives. More needs to be done if the goal is to increase the number of companies with publicly-traded shares and retail investors' direct share investments. One can highlight four objectives for future policy.

First, countries and regulators should focus on what increases the wealth of ordinary people so that they can have savings and a surplus to invest. It is not

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520 The original wording of § 1673 of the California Civil Code of 1872: "Every contract by which any one is restrained from exercising a lawful profession, trade, or business of any kind, otherwise than is provided by the next two sections, is to that extent void."

521 Section 16600 of California Business and Professions Code, the current section 16600: "Except as provided in this chapter, every contract by which any one is restrained from engaging in a lawful profession, trade or business of any kind is to that extent void."

522 Cont'l Car-Na-Var Corp. v. Moseley, 24 Cal. 2d 104, 110 (Cal. 1944).

523 Diodes, Inc. v. Franzen, 260 Cal. App. 2d 244, 255 (Cal. Ct. App. 1968): "The interests of the employee in his own mobility and betterment are deemed paramount to the competitive business interests of the employers, where neither the employee nor his new employer has committed any illegal act accompanying the employment change."

524 See Lee CM, Miller WF, Hancock MG, Rowen HS (eds) (2000).

enough to focus on the narrow sphere of company law, stock exchanges law, and securities law.

Second, regulators should more generally focus on legislative reforms that can help young growth firms.[525] A greater pool of firms can result in more firms that prefer to have publicly-traded shares and more firms to invest in.

Third, regulators should focus on making public markets attractive to firms, founders, and entrepreneurs. Markets designed with the interests of institutional investors and financial intermediaries in mind might not work for non-financial firms. Regulators should learn from recent market practices.

Fourth, there should be an alternative to venture capital. The abundance of early-stage funding from institutional investors has reduced traditional IPO levels.[526] A firm backed by venture capital may not need to raise other funding, and venture capital investments often lead to a trade sale. Regulators should focus on firms that either do not want or cannot raise venture capital.

In the following Chapter, we will try to develop new design principles on the basis of recent and earlier regulatory and corporate practices. Radical innovation is necessary to break the trend.

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525 See, for example, Elert N, Henrekson M, Sanders M (2019).

526 See, for example, The Economist, Buttonwood. VC after Softbank, 2 November 2019.

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PART II: **Future Design**

6 Design Principles for an Alternative

6.1 General Remarks About Financial Innovation and Design Principles

If you want to increase the number of companies with publicly-traded shares and retail investors' direct share ownership, you should make it easy for firms and retail investors.[1] Since there are many very good reasons for good firms to remain private, this would require a holistic approach, a large number of regulatory changes to remove bottlenecks,[2] and radical innovation. Incremental improvements have not helped so far. The most fundamental thing to do is to focus on the interests of non-financial issuer-firms. Fortunately, there is plenty of room for technological and social innovation.[3] It is perhaps possible to develop better design principles for the regulation of public stock markets.

Innovation and past design principles. We can start with a few words about innovation. Market innovation is driven by competition between firms, industries, and states. For example, competition between states was a powerful driver of the development of company law in the second half of the nineteenth century. There is intra-industry competition between firms. Since head-to-head competition reduces profits, firms need to create new market space.[4] There is even inter-industry competition, that is, competition from firms that produce substitute products or services.[5] Old industries tend to give rise to new industries in market spaces untainted by competition.[6]

There can be many drivers of financial innovation in particular.[7] Merton and Bodie wrote in 2005 that "[n]ew financial product and market designs, improved

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1 For nudging, see Thaler RH, Sunstein CR (2008).

2 For the O-ring theory, see Kremer M (1993).

3 Drucker PF (1992/2017) p 122: "And it is by no means only science or technology that creates new knowledge and makes old knowledge obsolete. Social innovation is equally important and often more important than scientific innovation."

4 Kim WC, Mauborgne R (2017) p ix.

5 Kim WC, Mauborgne R (2017/1999) p 46.

6 Kim WC, Mauborgne R (2017/2004) p 130: "Blue oceans denote all the industries not in existence today – the unknown market space, untainted by competition. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. There are two ways to create blue oceans. In a few cases, companies can give rise to completely new industries, as eBay did with the online auction industry. But in most cases, a blue ocean is created from within a red ocean when a company alters the boundaries of an existing industry."

7 For a review, see Tufano P (2003).

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computer and telecommunications technology, and advances in the theory of finance over the last generation have led to dramatic and rapid changes in the structure of global financial markets and institutions."[8] According to a study presented to the European Parliament, "[f]inancial innovation has its roots in technical and technological changes, regulatory changes, market condition changes and economic policy changes."[9]

Financial innovation is a form of technological and social innovation. There are many forms of social innovation in finance ranging from double-entry accounting to derivatives.[10] Financial innovation can mean contractual innovation,[11] organisational innovation, or regulatory innovation. Regulatory innovations have changed "the rules of the game" and created new kinds of markets.

Generally, there is a long-term pattern of financial products initially offered by intermediaries ultimately moving to markets. This pattern is powered by technological advancement and a decline in transaction costs.[12]

A 2015 World Economic Forum study identified "safe bets" for market change. For example, they include commoditisation and a shift to advisory models. According to the study, the ability to fulfill the transaction needs of customers becomes commoditised by market connection platforms. Moreover, the ability of financial intermediaries to build customer relationships based on advice will become more important to their competitiveness as their role in counterparty discovery and negotiation diminishes.[13]

Stock exchanges as intermediaries probably are no exception to the long-term pattern. They seem to be natural targets for disruptive innovation.[14]

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8 Merton RC, Bodie Z (2005) p 2.

9 European Parliament (2017) p 4.

10 Luca Pacioli described the double-entry accounting system used by Venetian merchants in his 1494 book Summa de Arithmetica, Geometria, Proportioni et Proportionalita. See Lerner J, Tufano P (2012) pp 526–527 on how the focus of writings on financial innovations has been the attempt to catalog the inventions. They discuss the schemes of Goetzmann WN, Rouwenhorst KG (2005), Merton RC (1992) and Crane DB, Froot KA, Mason SP, Perold A, Merton RC, Bodie Z, Sirri ER, Tufano P (1995).

11 See Coyle JF, Green JM (2014) pp 177–182.

12 Merton RC, Bodie Z (2005) pp 14–15, citing Finnerty J (1988) and Finnerty J (1992).

13 World Economic Forum (2015) p 174.

14 See *ibid.*, p 13 synthesising "six high level insights" on innovation in financial services: "1 Innovation in financial services is deliberate and predictable; incumbent players are most likely to be attacked where the greatest sources of customer friction meet the largest profit pools[.] 2 Innovations are having the greatest impact where they employ business models that are platform based, data intensive, and capital light … 4 Incumbent institutions will employ parallel strategies; aggressively competing with new entrants while also leveraging legacy assets to provide those same new entrants with infrastructure and access to services … 6 Disruption will not

Generally, financial innovation that relates to the rules of the game can relate to market regulation or the practices of market participants. For example, the discovery of commercial paper changed banking.[15] The rise of institutional investment, venture capital, and private equity changed corporate governance and corporate strategy. Index investing is changing securities markets.[16] There have been major changes in the design of securities issued by companies,[17] in the way securities are issued, in the national markets where securities are issued,[18] and in the structure and regulation of stock markets.[19] There is no "best way" to organise financial functions and stock markets.[20]

The rules of the game nevertheless play a fundamental role. The rules of the game largely are based on regulation.[21] Rational market participants tend to adapt to regulation. The behaviour of rational market participants tends to lead to the emergence of market practices. Market practices may influence new regulation.

All rational regulation tends to reflect certain ideas about design principles. Rules on limited-liability companies, stock exchanges, and the issuing of shares to the public have reflected various design principles over time. These design principles have changed due to changing business practices and political preferences (Chapters 2–5).

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be a one-time event, rather a continuous pressure to innovate that will shape customer behaviours, business models, and the long-term structure of the financial services industry".

15 Drucker PF (1992/2017) p 122.

16 Samuelson PA (1974); Samuelson PA (1994).

17 Finnerty J (1992); Miller MH (1986); Merton RC (1992).

18 Carow KA, Erwein GR, McConnell JJ (1999) p 55 on changes in the US in 1970 – 1997: "Traditional registered offerings have been partly displaced by shelf registered offerings and Rule 144 A private offerings. And once exclusively domestic U.S. offerings are increasingly being supplemented by foreign market offerings by U.S. companies, and by simultaneously domestic and foreign offerings."

19 Tufano P (2003) p 310: "Financial innovation is the act of creating and then popularizing new financial instruments, as well as new financial technologies, institutions, and markets." European Parliament (2017) p 4: "Financial innovation can be defined as new financial instruments, technologies, institutions, and markets."

20 Merton RC, Bodie Z (2005) p 17. See also Macey JR, O'Hara M (2005) p 593: "By examining the incredibly rich heterogeneity among the governance systems that regulate trading on exchanges worldwide, we demonstrate that there is no 'corner solution' or one-size-fits-all remedy to the question of how to best organize the regulatory framework in which stock exchanges and other trading venues operate." For the contingency theory, see Woodward J (1958).

21 Friedman M (1970) on "the rules of the game"; Coase RH (1988) p 9 on transaction costs; Goode RM (1998) p 38 on market practices.

The normative objectives of any sector of commercial law are fixed for the time being only. They will be adapted to changed circumstances in the future, at least in economies that want to prevail in competition and prosper. For example, it would be a mistake to assume that the reception of the neoclassical economic theory of the 1970s in corporate law reflects natural or divine law, and it would be a mistake to assume that the history of company and securities law has ended.[22] Moreover, it is now understood that neoclassical economic theory does not describe corporate reality very well (see sections 2.4.13, 2.5 and 5.3).[23]

Some of the design principles that have prevailed in the political, financial, and legal discourse have contributed to bad societal outcomes (see Chapter 1). Current design principles have contributed to a decline in the number of listed companies, an increase in the concentration of business, and an increase in financial inequalities. Current design principles have made it more difficult for retail investors to invest in the shares of companies directly and very difficult for them to invest directly in the shares of growth firms. The current design of the rules of the game forces retail investors to turn to financial intermediaries that manage other people's money.

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22 Hansmann H, Kraakman R (2001) on the end of the history of corporate law. To illustrate the existence of alternatives, see Merton RC, Bodie Z (2005) p 2: "… the neoclassical paradigm, as an effective abstraction from complex reality, is being challenged by two alternative paradigms, the new institutional (or neo-institutional) finance and behavioral finance. Instead of examining each as competing alternatives, our central methodological thesis for implementing a functional theory of financial institutions is a synthesis of the neoclassical, the new institutional, and the behavioral perspectives on finance. We call this attempt to synthesize these three perspectives, Functional and Structural Finance (FSF)."

23 Demsetz H (1983) p 377: "It is a mistake to confuse the firm of economic theory with its real-world namesake. The chief mission of neoclassical economics is to understand how the price system coordinates the use of resources, not the inner workings of real firms." Holmström B, Milgrom P (1987) p 304: "Optimal schemes derived from a spare and approximate model of reality may perform quite poorly in the richer real environment." Simon HA (1991) pp 26–27: "A fundamental feature of the new institutional economics is that it retains the centrality of markets and exchanges. All phenomena are to be explained by translating them into (or deriving them from) market transactions based upon negotiated contracts … Although the new institutional economics is wholly compatible with and conservative of neoclassical theory, it does greatly multiply the number of auxiliary exogenous assumptions that are needed for the theory to work … Since such constructs are typically introduced into the analysis in a casual way, with no empirical support except an appeal to introspection and common sense, mechanisms of these sorts have proliferated in the literature, giving it a very ad hoc flavor. In general, the new institutional economics has not drawn heavily from the empirical work in organizations and decision-making for its auxiliary assumptions."

Innovation and new design principles. The design principles behind current laws reflect the political objectives of the past. New design principles will be adopted in the future to reach new objectives. In this Chapter, we will try to choose and define design principles for a regulatory framework that can connect retail investors with growth firms in a better way. The new design principles should facilitate retail investors' direct investment in publicly-traded shares with minimal use of financial intermediaries.

What kinds new of design principles do we need for the regulation of future stock markets? Obviously, the choice of design principles depends on the chosen context. In this case, it is necessary to take into account the particular characteristics of stock markets.

All markets possess certain common characteristics. It is necessary to address certain common questions[24] and use certain kinds of rules[25] regardless of the market. For example, regulators use default rules or more specific rules,[26] and they use scope rules that set out the intended result of market transactions.[27]

Stock markets are qualified markets. Stock markets have been regarded as coherent systems[28] that have their own particular characteristics.[29] However,

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24 Ostrom E (2005) p 188: "Participants and actions are assigned to positions. Outcomes are linked to actions. Information is available about action-outcome linkages. Control is exercised over action-outcome linkages. Costs and benefits are assigned to action-outcome linkages." See also Ostrom E (2010) p 415: "To specify the structure of a game and predict outcomes, the theorist needs to posit the: 1. characteristics of the actors involved (including the model of human choice adopted by the theorist); 2. positions they hold (e. g., first mover or row player); 3. set of actions that actors can take at specific nodes in a decision tree; 4. amount of information available at a decision node; 5. outcomes that actors jointly affect; 6. set of functions that map actors and actions at decision nodes into intermediate or final outcomes; and 7. benefits and costs assigned to the linkage of actions chosen and outcomes obtained."

25 Ostrom E (2010) p 420: "The seven types of rules are: 1. Boundary rules that specify how actors were to be chosen to enter or leave these positions; 2. Position rules that specify a set of positions and how many actors hold each one; 3. Choice rules that specify which actions are assigned to an actor in a position; 4. Information rules that specify channels of communication among actors and what information must, may, or must not be shared; 5. Scope rules that specify the outcomes that could be affected; 6. Aggregation rules (such as majority or unanimity rules) that specify how the decisions of actors at a node were to be mapped to intermediate or final outcomes; and 7. Payoff rules that specify how benefits and costs were to be distributed to actors in positions (Crawford and Ostrom 2005)."

26 Ostrom E (2005) p 210: "The seven default conditions that we specify in Table 7.2 are those that would be used by a participant or an observer in a general legal system that presumed general freedom unless a rule specifically prohibited or mandated an act or event."

27 See Ostrom E (2005) pp 33 and 189.

28 Holmström B (2015) p 7; Milgrom P, Roberts J (1990) pp 513 and 526.

such stock markets only include a tiny fraction of companies in the world. Almost all companies remain outside public markets. Moreover, public stock markets are governed by multiple and large regulatory and contractual frameworks. To study the markets of real life, it is necessary to choose a holistic approach.

We will roughly distinguish between three kinds of design principles for the regulation of markets. They are called policy principles, strategic design principles, and operational design principles. These distinctions are somewhat arbitrary and the classification of a certain design principle can be a matter of taste. However, the classification of the design principles in this way can help to understand the broad or more specific functions of each design principle. Typically, policy principles that name the preferred values are akin to the broad goals of regulation. Strategic design principles set out the proposed actions in broad terms. Operational design principles are not only embedded in the broader goals of regulation but identify even one or more legal tools and/or practices to reach the goals.[30]

Policy principles. We can start with the most fundamental design principles that we call policy principles. The function of policy principles is to lay down the preferred values. Such design principles generally are applied when developing more concrete design principles. In regulatory practice, policy principles can be disclosed and transparent or remain undisclosed and vague. The proposed policy principles (section 6.2) that reflect the values of this book are as follows:

- increase financial equality;
- increase competition;
- foster the interests of firms in general and growth firms in particular;
- facilitate a risk-taking culture for retail investors; and
- ensure that there is a mandatory and comprehensive back-up system that leaves no people of the community behind.

Strategic design principles. Mere values and wishful thinking will not lead anywhere. You need societal and legal institutions, structures and mechanisms. The policy principles must, therefore, be complemented by more concrete principles. Strategic design principles set out the proposed actions in broad terms.

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29 Holmström B (2015) p 7: "[S]tock markets are in almost all respects different from money markets … : risk-sharing versus liquidity provision, price discovery versus no price discovery, information-sensitive versus insensitive, transparent versus opaque, large versus small investments in information, anonymous versus bilateral, small unit trades versus large unit trades. To this should be added the important difference that money markets operate under much greater urgency than stock markets."

30 For legal tools and practices in User-friendly Legal Science, see Mäntysaari P (2017).

When the underlying values and policy principles change, new strategic design principles will become necessary.[31] We propose the following strategic design principles (section 6.3):
- interpret the interests of the company as the interests of the firm;
- focus on the function of controlling shareholders, minority shareholders and retail investors;
- foster long-termism;
- facilitate mutual trust;
- address enforcement problems through the use of public enforcement and the socialisation of enforcement costs;
- increase the number of firms with publicly-traded shares;
- reduce costs for issuers, controlling shareholders, and retail investors;
- increase diversity;
- provide an alternative to financial intermediation and venture capital;
- use regulatory dualism;
- facilitate retail investors' direct investments in growth firms;
- use market practices as a model for regulation;
- ensure sufficient liquidity;
- complement the retail investors' direct investment regime with access to low-cost funds, and
- complement the retail investors' direct investment regime with social security.

Operational design principles. Operational design principles are ways to implement the strategic design principles in more concrete ways. We propose the following operational design principles (section 6.4):
- simplify the process of listings, the issuing of shares to the public, periodical reporting obligations and ongoing disclosures;
- limit the national scope of securities law;
- limit the international scope of securities law and use mutual recognition;
- facilitate retail investors' cross-border direct investments;
- facilitate the use of depositary receipts;
- make it easier for retail investors to take reasonable investment decisions;
- focus on the incentives of controlling shareholders and retail investors;
- develop SME exchanges;
- create microexchanges;

31 See, for example, FESE (2015) p 3: "As the operators of Europe's Regulated Markets, FESE members believe that a fundamental reorientation of European policies is needed to serve the original goals of the Single Market better at this current point in time."

- create the small public limited-liability company as a new company form to complement the microexchange;
- facilitate the pooling of retail investors' private placements; and
- use financial technology.

Alternative design principles: FESE. There can be alternative proposals for design principles depending on the value-based objectives. For example, the Federation of European Stock Exchanges (FESE) published in its 2019 FESE Blueprint twenty principles and policy recommendations to take the EU's Capital Markets Union (CMU) forward in accordance with the member exchanges' ambitions. The principles were grouped under seven main themes:
- Overall Ambition and Approach (Principles 1–5);[32]
- Funding the Economy: Serving Investors and Companies (Principles 6–9);[33]
- Fair and Orderly Equity Market Structure (Principles 10–13);[34]
- Efficient Risk Management – Exchange Traded Derivatives (ETDs) (Principles 14–16);[35]
- New Technologies (Principle 17);[36]
- Sustainable Finance (Principle 18);[37] and

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32 FESE (2019) p 8: "The CMU should: 1 Be framed around a holistic regulatory agenda; 2 Increase the overall size of EU public capital markets; 3 Strengthen supervisory convergence while preserving the role and value of national competent authorities (NCAs); 4 Remove fiscal disincentives against equity financing; 5 Reject the adoption of transaction taxes given the detrimental impact this would have on public capital markets; ..."

33 *Ibid.*, p 8: "The CMU should: ... 6 Support measures to foster financial literacy for both investors and entrepreneurs; 7 Increase levels of retail investor participation in public capital markets; 8 Increase levels of institutional investor participation in public capital markets; 9 Support local ecosystems; ..."

34 *Ibid.*, p 8: "The CMU should: ... 10 Support an increase in the proportion of price forming trading taking place on lit trading; 11 Promote liquid markets with efficient price formation; 12 Ensure that market data issues are assessed holistically, with a focus on assessing the entire industry value chain and safeguarding price formation; 13 Allow benchmarks to serve the economy as already intended by current legislation; ..."

35 *Ibid.*, p 8: "The CMU should: ... 14 Support a position limits' regime that allows new products to flourish; 15 Support an extension of the EMIR clearing obligation to all standardised derivatives contracts; 16 Support the removal of ETDs from MiFIR's 'non-discriminatory' access provisions; ..."

36 *Ibid.*, p 8: "The CMU should: ... 17 Safeguard a level playing field of activities in the field of new technologies by applying the principle 'same business, same rules' ..."

37 *Ibid.*, p 8: "The CMU should: ... 18 Support Europe in mobilising sustainable finance; ..."

– Pursuit of Global Competitiveness and Access (Principles 19–20).[38]

The particular objectives of the FESE Blueprint can be expected to be based on the interests of FESE's members. For example, their interests are reflected in Principle 17. It states that all marketplaces should be governed by the same regulatory framework according to the principle "same business, same rules". This might help established marketplaces grow and make a profit in a stagnating market.[39] We take a different approach to increase the size of stock markets, the number of companies with publicly-traded shares, retail investors' direct investments in shares, and financial equality. Having said this, many of our proposals are similar.

Alternative design principles: CMU. The FESE Bluebrint was intended to improve the European Commission's CMU action plan. In the action plan, the European Commission applied its own design principles.

According to Commission staff, the CMU action plan builds upon three kinds of objectives, namely overarching, strategic, and operational objectives.[40]

Overarching objectives set the long-term goal of a single market for capital. A single market for capital "would contribute to two overarching objectives in the Commission's agenda for the years to come: 1) Greater support to private and public investments through the development of a capital market architecture that supports all European countries; and 2) More sustainable financial integration process to stabilise and improve the functioning of Europe's financial system."[41]

38 *Ibid.*, p 8: "The CMU should: … 19 Ensure that an EU equivalence regime preserves market stability as well as open, competitive and global markets; 20 Ensure that EU equivalence rules do not unduly restrict market innovation and the ability to provide EU investors with access to global capital markets."

39 Ferrell A (2007) pp 10 – 11: "A for-profit stock exchange, burdened with expensive regulatory duties … and competing with trading platforms that have lower regulatory burdens or no regulatory duties must grow its business to be successful. As with any business, profit growth may come from increased revenues or reduced costs. For a stock exchange, revenue growth must come from increased trading volume, by adding new listings or by acquiring other exchanges or trading platforms. Cost reduction may come from a reduction in regulatory burdens or through economies of scale, such as the consolidation of separate market surveillance units and operating acquired trading platforms on existing surplus IT capacity. This emerging business dynamic may be driving a variety of fundamental changes in global regulation." Macey JR, O'Hara M (2005) p 582: "Now, however, there is not a congruity of interests: rules that benefit the exchange as a firm may well be to the detriment of the market."

40 European Commission (2017c).

41 *Ibid.*, section 1.1.1.

Strategic objectives set the direction on how to create a single market for capital. Capital markets would need to be more “competitive and efficient”, “financially stable and integrated”, and “cohesive”.[42]

Operational objectives “define what is the scope of individual policy actions to be effective”: “On a pan-European scale, the CMU action plan promotes the following operational objectives: 1. Greater data availability and comparability on a cross-border basis (for price discovery); 2. More accessibility to markets and product (with fair access); [and] 3. Stronger enforcement of rules and procedures (to achieve greater legal certainty and investor protection).”

After the choice of the three levels of objectives (overarching, strategic and operational), the CMU action plan focuses on “one general area of intervention on supervision and capital market capacity building and six specific areas of intervention according to the developing phases of the funding escalator and investment”. They are “defined as follows: 1. Strengthening supervision and building capital markets capacity in the EU; 2. Financing for innovation, start-ups and unlisted companies; 3. Making easier for firms to raise money on public markets; 4. Strengthening banking capacity to support the economy; 5. Investing for long-term, infrastructure and sustainable investments; 6. Fostering retail investment; and 7. Facilitating cross-border investments.”[43]

The fundamental problem with this set of three-level objectives is that the overarching objectives are too general and vague and therefore give little guidance for the development of strategic objectives. Laws generally are a way to balance conflicting societal interests,[44] but the overarching objectives fail to identify the interests of any party. This is reflected in the choice of strategic objectives. The connection to the overarching objectives is thin. The strategic objectives can only to a limited extent be derived from the overarching objectives. Each strategic objective remains too general and vague. The failure to choose the relevant interests renders the strategic objectives to mere topics that lack substance. The operational objectives and areas of intervention suffer from the vagueness of the overarching and strategic principles. Failure to choose the societal interests means that the CMU action plan fosters the interests of financial intermediaries. This could be the result of path dependency in European market regulation. One cannot exclude regulatory capture.

While these objectives and areas of intervention bear some resemblance to the design principles proposed in this Chapter, there are differences that reflect

42 *Ibid.*, section 1.1.2.
43 *Ibid.*, section 1.1.3 and Figure 1.11 The CMU Action Plan.
44 Heck P (1914).

the different starting points. The policy principles proposed in this Chapter are not identical with the overarching objectives represented by the European Commission. The strategic and operational design principles proposed in this Chapter have a different substance that reflects the choice of more specific interests.

This said, the design principles proposed in this Chapter seem to be aligned with the objectives of the EU. The choice between the respective objectives and design principles is a question of policy and societal preferences.

6.2 Policy Principles

6.2.1 General Remarks

Policy principles lay down the underlying core values.[45] We propose five policy principles for future regulation. They relate to financial equality (section 6.2.2), competition (section 6.2.3), the interests of firms and growth firms (section 6.2.4), a risk-taking culture (6.2.5), and the existence of a back-up system (section 6.2.6). The proposed policy principles are to some extent based on earlier policy principles used in the regulation of companies and securities markets. Since values are not universal, the proposed policy principles do not reflect the prevailing values in all jurisdictions or in all legal and regulatory discourse.[46] Different values can lead to different policy principles, different strategic design principles, and different operational design principles. There are also competing policy principles (section 6.2.7).

45 Gray J (2019) p 21: "Science cannot close the gap between facts and values. No matter how much it may advance, scientific inquiry cannot tell you which ends to pursue or how to resolve conflicts between them." See Schwartz SH (2012) on substantial differences in the value priorities of individuals across cultures.

46 For example, mere expanding the scope of capital markets is not used as a policy principle here but seems to be regarded as an important goal by La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (1997) p 1149: "The results of this article confirm that the legal environment – as described by both legal rules and their enforcement – matters for the size and extent of a country's capital markets. Because a good legal environment protects the potential financiers against expropriation by entrepreneurs, it raises their willingness to surrender funds in exchange for securities, and thence expands the scope of capital markets."

6.2.2 Financial Equality

The first policy principle is to increase financial equality. One can say that "[t]he modern world was caused by egalitarian liberalism".[47] Equality belongs to the characteristic societal values of continental western Europe and the Nordic countries. Equality is now codified as one of the fundamental values of the European Union[48] and addressed by the European Pillar of Social Rights. In contrast, the US Bill of Rights largely is concerned with rights of liberty rather than rights of equality.[49]

According to Justice Brandeis, "[w]e must make our choice. We may have democracy, or we may have wealth concentrated in the hands of a few, but we can't have both."[50] Increasing financial equality has not featured in earlier design principles for company and securities law. Obviously, it is one of the central goals of socialism. However, one can find traces of financial equality as a reasonable goal even in corporate law scholarship.[51] Walther Rathenau, a prominent German industrialist and politician, proposed the wide distribution of shareholdings in 1917.[52] In 1968, Adolph A. Berle wrote about stockholders and sharing the wealth: "Why have stockholders? … Privilege to have income and a fragment of wealth without a corresponding duty to work for it cannot be justified unless

47 McCloskey DN (2016) p xv.

48 Article 2 of the Treaty on European Union: "The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail." See also Articles 3(3) and 3(5). For the evolution of the notion of equality, see Benedí Lahuerta S, Zbyszewska A (2018).

49 Wilkinson JH III (1992) pp 235 – 236: "Its emphasis on liberty is not difficult to explain. The American Revolution was largely a war over liberty. The Bill of Rights represented the fruition of a conflict fought to secure both freedom of self-governance and freedom from the reach of the omnipresent state … [T]he idea of national constitutional equality began to emerge only in the aftermath of World War II." One may note that Alexis de Tocqueville described equality as one of the fundamental societal values in nineteenth-century America and that the First and Fourtheenth Amendments dealt with what were the principal inequalities of the time: religion and slavery. For freedom rather than equality Rathenau W (1917b) p 60: "Ein Baum wächst in Freiheit."

50 Dilliard I (1941) p 42.

51 One can note that Thomas Piketty focused on tax law rather than design principles for company law, securities law, and stock exchange law. Piketty T (2014) p 471: "[T]he ideal policy for avoiding an endless inegalitarian spiral and regaining control over the dynamics of accumulation would be a progressive global tax on capital." While tax law obviously is important, other rules of the game will influence the outcome as well.

52 Rathenau W (1917b) pp 143 – 144.

most members of the community share it. A guaranteed annual wage for all, a governmentally assured minimum income, a stockholder's share in the United States distributed to every American family – these are all different ways of giving Americans capacity to settle their own lives rather than having their lives settled for them by blind economic forces, by compulsions of poverty or by regulations of a social-work bureaucracy. Wide distribution of stockholdings is one way of working toward this."[53]

The concentration of shareholdings seems to have become a concern even in the business community in recent years.[54] In 2019, Business Roundtable, an influential association of the CEOs of America's leading companies, nevertheless chose to recommend a stakeholder approach without addressing the question of wide distribution of shareholdings.

6.2.3 Competition

The second policy principle is to increase financial equality primarily through competition. Competition belongs to the most fundamental values of textbook market economy, the European Union,[55] and the US.

If retail investors primarily rely on financial intermediation, stock markets become deretailised and institutionalised. The institutionalisation of stock markets will increase the concentration of economic power in the hands of the largest money managers. If the earlier decentralised model of stock ownership and market economy is replaced by a more concentrated model increasingly controlled by a relatively small number of people, institutional investors and fund managers should be regulated in a new way.[56] The alternative is to reduce concentration by increasing competition.

Now, if retail investors rely on financial intermediation only, they will end up earning lower returns and there will be more concentration of wealth, unless the

53 Berle AA (1968) p xxxv.

54 See The FT View. At a record high, the US market is still shrinking. Financial Times, 24 August 2018.

55 Article 3(3) of the Treaty on European Union; Article 119(1) of the Treaty on the Functioning of the European Union.

56 Cartwright BG (2007): "If essentially all our public corporations, the engines of our economy, may be influenced or controlled by a small roomful of people, it's time to take a close look at who they are and what motivates them." Lenin VI (1917) Chapter II: "As banking develops and becomes concentrated in a small number of establishments, the banks grow from modest middlemen into powerful monopolies ... [W]e must first of all examine the concentration of banking."

cost of financial intermediation is brought down by competition. If the financial intermediation industry as a whole is protected against competition, the cost of financial intermediation will be higher than it should be. High entry barriers will increase the concentration of the financial intermediation industry, the market power of intermediaries, costs to retail investors, and the concentration of wealth. Justice Brandeis wrote in 1914 that "the banker controls the only avenue through which the investor in bond and stocks can ordinarily be reached. The banker has become the universal tax gatherer."[57]

It is, therefore, assumed here that it is not enough to rely on competition between financial intermediaries *inter se*,[58] because there is too little price competition[59] and too little radical innovation. There should be an alternative to the current market structure that protects the financial intermediation industry as a whole against competition and facilitates rent-seeking by financial intermediators.[60]

Company law, securities law, and the regulation of marketplaces should facilitate the exposure of the financial intermediation industry to competition, and competition should even be increased by facilitating retail investors' direct investments in non-financial firms.[61]

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57 Brandeis LD (1914) p 110. See also Auerbach J, Hayes SL (1986) pp 16 – 17.

58 For the benefits of competition in international securities regulation, see even Romano R (2001). For an example of overreliance on competition between stock exchanges inter se, see Gadinis S, Jackson HE (2007) pp 1250 – 1252: "Competition … will lead different exchanges to develop different regulatory standards and trading models, thus catering to varying needs of the investing public. For a market economy to flourish, exchanges should be able to shape the services they offer to their customers, while investors should be free to choose the bundle of services that match their preferences."

59 European Commission (2018) section 4.1.6 p 67: "Although retail investors have in principle access to a large variety of investment products and distributors, the current low level of transparency in terms of fees prevents the customer to fully understand how much he will end up paying for his investment."

60 Paragraph 65 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange): "Indeed, the threat of entry and the existence of alternatives do constrain incumbents and spur them to innovate more than would be the case absent competition." Paragraph 69: "As explained above, due to strong network effects and economies of scale and scope the provision of financial market infrastructure services is characterised by a high degree of concentration. For any given product, there are, generally speaking, few infrastructure providers offering it, or at least having a meaningful market share. As a result, one of the principal aims of regulatory initiatives in this industry is to mitigate the network effects by opening up the markets to competition."

61 Clayton J (2019): "The problem is, Main Street investors generally have access to only … our public markets. They have extremely limited, and in many cases costly and otherwise less attrac-

If one of the critical roles of finance is creative destruction, it is hard to argue why financial intermediation should be an exception. In the words of Justice Brandeis, one can "eliminate the banker-middleman where he is superfluous".[62]

6.2.4 Interests of Firms and Growth Firms

The third policy principle is to facilitate the existence, development, and survival of many good firms by fostering the interests of firms in general and growth firms in particular.[63]

The existence, development, and survival of good firms is important for most people, local communities, and the state.[64] Obviously, there will be few retail investors unless ordinary people can earn a decent living as employees of successful firms. Moreover, the attainment of long-term sustainability goals such as the 17 UN sustainable development goals will not be possible without successful firms.

The existence of firms (das Unternehmen, l'entreprise) is recognised in continental European company law and legal scholarship. The interests of the firm (Unternehmensinteresse, l'intérêt social) explain much of the contents of continental European company law (sections 2.4.13, 2.4.14 and 2.4.16). This should be unsurprising in the light of the importance of firms to society as a whole.

Firms that do their utmost to survive in the long term are more likely to survive in the long term.[65] Firms that choose a different goal, whatever it may be, are less likely to survive in the long term. For example, a firm is more likely to sur-

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tive, access to our private markets." Steil B (2002b) p 9: "Three observations in particular stand out: · Reducing trade intermediation through the expansion of automated trading networks reduces trading costs and increases investment returns. · Reducing trading costs reduces the cost of capital for public companies, and thereby stimulates investment. · The development of more liquid and more highly capitalized equity markets increases economic growth."

62 Brandeis LD (1914) p 109.

63 There are conflicting approaches in the world. For the UK approach, see The Kay Review (2012) paragraph 2.32: "Equity markets today should primarily be seen as a means of getting money out of companies rather than a means of putting it in." In contrast, see European IPO Task Force (2015) p 17: "While the indirect benefits of well-functioning IPOs accrue to the whole economy, the main direct stakeholders of IPO markets are the companies that are being financed and the investors that are investing in them. It is important to note what the needs of these two key stakeholders are from IPO markets, and to ensure that European policy measures the benefits of capital markets from their perspective."

64 Rathenau W (1917a).

65 See also Rathenau W (1917b) pp 144–145; Alchian AA (1950).

vive if its managers, employees, and corporate bodies share a culture of creating and maintaining "the organizational capabilities of the enterprise" to prevail in competition.[66] Since firms are embedded in society, the long-term survival of a firm can also depend on whether its business is aligned with what is socially acceptable and what supports the sustainability of society as a whole. In contrast, a firm is less likely to survive in the long term when it is run in the interests of fictive "owners" that only exist in economic theory, or in the interests of real short-term speculators that prefer to loot the firm in the short term.[67]

Depending on the firm, the people that act on its behalf may for one reason or another prefer to take decisions that benefit the firm.[68] Whether retail investors have a chance to invest in such firms can depend on whether it is in the interests of the firm. Firms that act in their own self-interest are less likely to issue shares to retail investors or go public if it is contrary to the interests of the firm.[69] To increase the number of firms with publicly-traded shares, it is therefore necessary to ensure that the applicable regulatory regime is aligned with the interests of the firm. SMEs are reluctant to have publicly-traded shares for one or more reasons that should be addressed.[70]

Young growth firms that have survived the start-up phase can be particularly interesting for investors. Firms that have survived the start-up phase are more likely to have growth potential. Young firms play a crucial role in employment creation.[71] Moreover, a small number of such firms can later become large and valuable.

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66 Chandler AD (1990) p 594: "At the core of this dynamic were the organizational capabilities of the enterprise as a unified whole … But only if these facilities and skills were carefully coordinated and integrated could the enterprise achieve the economics of scale and scope that were needed to compete in national and international markets and to continue to grow."

67 See, for example, Hopt KJ (2021) p 17 on banking.

68 For incentives, see, for example, Simon HA (1991) p 30.

69 See even Blair MM, Stout LA (1999) p 281: "[T]he choice to 'go public' may be driven in part by team production considerations."

70 OECD (2015c) p 130: "Difficulties facing SMEs seeking public equity financing are not limited to cost (admission fees, advisors and broker commissions), red tape and reporting requirements. Cultural factors and management practices also constitute challenges for SMEs. Lack of confidence to go through the offering process, fear of being exposed to share price volatility, aversion to sharing sensitive information but also lack of education around the process of listing and life after an IPO are important reasons for SME reluctance to join equity capital markets. In addition, entrepreneurs tend to be unwilling to relinquish ownership or control of their business or accept potential lock-in periods upon listing …"

71 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.2 and footnote 10.

While all firms need funding, young firms have particular funding needs. The funding model that the firm chooses at this stage will determine much of the future of the firm and even whether retail investors will get a chance to participate in its value generation. Financial innovation therefore plays a particularly important role for young firms.[72]

Bank funding is often not available for start-ups or for firms in the early expansion phase, because banks are risk averse.[73] Even if it were available, the firm's growth in the early expansion phase would be hampered by interest payments and repayments of debt. Start-ups and firms in the early expansion phase therefore need equity funding.

Equity funding may be provided by initial or early investors. They may include angel investors and venture capital funds. To grow, the firm needs plenty of funding after the start-up phase. However, angel funding and venture capital funding may not be available or may dry up. Overreliance on one source of funding increases the firm's risk exposure.[74]

Moreover, some initial investors may prefer an exit. This can lead to a funding gap and a trade sale. An exit means in most cases a trade sale rather than an IPO.[75] New venture capital investors may help to fill the funding gap. However, venture capital investment merely postpones the inevitable trade sale. A trade sale increases neither the number of companies with publicly-traded shares nor retail investors' direct shareholdings in growth firms.

The Economist, a newspaper, gave an example of such mechanisms at work in the case of TransferWise in May 2019: "[TransferWise] said it had collected $292 m in fresh capital. The fundraising round, led by … venture-capital firms … valued it at $3.5bn … [TransferWise's CFO] says it did not need to raise more capital … But it needed patient capital to provide an exit to its 'angel' investors … In due course it

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72 See, for example, Rajan RG, Zinlages L (1998) p 560 on industry growth: "New establishments are more likely to be new firms, which depend more on external finance than established firms. So the growth of the number of establishments in industries dependent on external finance should be particularly sensitive to financial development. This is indeed the case."

73 See, for example, Article 92 of Regulation 575/2013 (CRR) and Article 160 of Directive 2013/36/EU (CRD IV) on the connection between risk exposure and own funds requirements. Vitols S (2001) pp 555–556 on the German bank-based financial system as a barrier to the achievement of the Silicon Valley model of development.

74 Tim Bradshaw, Nic Fildes and Arash Massoudi, OneWeb collapses after SoftBank funding talks fall through. Start-up that wanted to beam broadband internet from space had raised $3bn from investors. Financial Times, 28 March 2020.

75 The Silicon Valley model of the past is described for example in Gilson RJ (2003) and Vitols S (2001) p 555.

will consider going public, though [TransferWise's CFO] acknowledges that its latest funding round may have delayed that moment."[76]

It could, therefore, be beneficial to design a regulatory framework that helps young firms to finance their growth by raising equity funding from retail investors in addition to their traditional sources of equity funding.

Now, growth firms tend to be managed by committed entrepreneurs and professional managers, and controlled by committed shareholders. To foster the interests of growth firms and facilitate retail investors' direct shareholding, the regulatory framework should recognise the interests of the firm as an organisation, the interests of the company's controlling shareholders, and the interests of retail investors.[77] Moreover, it should allocate rights, duties, incentives, and information to balance these interests in a way that fosters the interests of the growth firm.

This said, questions of ownership and control are secondary to the policy objective of facilitating the existence, development, and survival of many good firms. There is plenty of variation of ownership and control, which can be illustrated with three examples. The backbone of the German economy is its Mittelstand, that is, a large number of small and medium-sized firms each with a large market share in a small niche. Mittelstand firms are mostly private and controlled by a controlling shareholder or shareholders. In contrast, the Chinese economy is dominated by large state-owned enterprises controlled by the SASAC.[78] In Israel, "the first period of expansion was achieved through an entrepreneurial government that dominated a small, primitive private sector; the second through a thriving entrepreneurial private sector that was initially catalyzed by government action".[79]

6.2.5 Risk-Taking Culture

The fourth policy principle is to facilitate a risk-taking or equity culture for retail investors.[80] The lack of an equity culture represents a greater impediment in Europe than in the US.[81]

76 The Economist, Into the big league, 23 May 2019.
77 See even European IPO Task Force (2015) p 17.
78 State-owned Assets Supervision and Administration Commission of the State Council.
79 Senor D, Singer S (2011) Chapter 6.
80 Compare European IPO Task Force (2015) p 56, Recommendation 4: "Create an equity culture in Europe, including the provision of education and non-legislative initiatives".
81 OECD (2015c) p 130.

An equity culture is necessary for various reasons. First, a nation of risk-averse bondholders and rent-seekers will not prevail in competition in the long run. Second, where the retail investors' risk appetite is too low, they will miss out on the growth potential of young firms. Third, such retail investors tend to invest in financial products issued by the financial intermediation industry. When doing so, they contribute to an increase in the polarisation of income and wealth.

6.2.6 Back-Up System

The fifth policy principle is ensuring that there is a back-up system. The regulatory regime should be complemented by a comprehensive and mandatory back-up system that ensures that the financial survival of members of the community will not be down to luck. Moreover, it should ensure that their financial survival is not destroyed by their cognitive biases and personal characteristics.[82]

A mandatory and sufficient back-up system can increase investment in two ways. First, a mandatory system charges fees that can be invested for future use. Second, rational retail investors can be expected to accept a higher risk exposure where sufficient minimum pensions are guaranteed by a mandatory system. Generally, a back-up system is regarded as necessary for market economy to survive in the long term.[83]

6.2.7 Competing Policy Principles

Policy principles in general are based on values that are neither universal nor shared by all.[84] The choice of different values would lead to a different kind

82 Merton RC, Bodie Z (2005) p 9.

83 See, for example, Jamie Dimon, Chairman and Chief Executive Officer, JPMorgan Chase, Letter to Shareholders, April 4, 2019, p 45: "It's essential to have a strong social safety net – and all countries should be striving for continuous improvement in regulations as well as social and welfare conditions. Many countries are called social democracies, and they successfully combine market economies with strong social safety nets."

84 See, for example, The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final: "For the Single Market to remain a source of growth and opportunities for citizens and businesses, it must continue to adapt to new developments and challenges. There is an increased diversity of views on which priorities should be pursued and there are competing perceptions of potential benefits."

of study with possibly different kinds of results.[85] The proposed policy principles are an alternative to various competing policy principles. One can briefly mention three: economic efficiency, the reduction of transaction costs, and corporate social responsibility.

Economic efficiency is not chosen as a policy principle here although some scholars might assume that economic efficiency should be the main regulatory objective of capital market law.[86] It is true that efficiency has been mentioned as one of the goals of capital market regulation. However, it is just one of many goals. The Securities Acts,[87] EU securities law,[88] and company law have multiple goals (Chapters 2–4). Moreover, economic efficiency depends on subjective preferences, because efficiency cannot be determined without first choosing the costs and benefits that are regarded as relevant and the costs and benefits that are to remain hidden as externalities. The values and goals must be chosen before one can define what is "efficient". For example, market fundamentalism or laissez-faire is based on the assumption that "free" markets – that do not exist in real life as there would be no markets without the rules of the game – are "efficient". In this case, the goal probably is to transfer income and wealth from poorer market participants to richer market participants and increase polarisation. While rich market participants have the necessary resources to play the game and maximise their personal wealth, poorer market participants either lack the necessary resources to participate, or play the game and necessarily end up the losing side. For these reasons, "economic efficiency" is here regarded as rhetoric that can help to sell any chosen policy objective but not as a policy objective in its own right. Before arguing what is "efficient", one must choose the relevant goals according to the relevant value preferences that we here call policy preferences.

85 See, for example, Fox MB, Glosten LR, Rauterberg GV (2019) p 2: "In sum, we approach understanding the equity market from a distinctive perspective. Microstructure economics focuses on the difference in what market participants know. The central claim of this book is that this informational perspective significantly illuminates both the existing regulatory structure of our equity trading markets and how we can improve it."

86 See, for example, Kalss S (2017) pp 504–505 paragraph 37.

87 Section 11A of the Securities Exchange Act of 1934; Section 7 of the Securities Acts Amendments of 1975. See also Section 2(b) of the Securities Act of 1933 and Section 23(a)(2) of the Securities and Exchange Act of 1934 (as added by Section 106 of the Capital Markets Efficiency Act of 1996): "Whenever pursuant to this title the Commission is engaged in rulemaking and is required to consider or determine whether an action is necessary or appropriate in the public interest, the Commission shall also consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation."

88 See Article 3(3) of the Treaty on European Union.

Much of what was said of economic efficiency applies to transaction costs. Low transaction costs can be instrumental for the reaching of the chosen policy goals.[89] For example, a reduction in transaction costs can be in the interest of firms. Lower transaction costs for retail investors can improve the firm's access to funding and reduce its cost. Generally, addressing the issues that must be addressed in all transactions is instrumental for reaching the proposed policy goals but not suitable to be used as a policy goal in its own right. The issues that must be managed in all transactions include costs, risks, agency relationships, and information.[90]

Corporate social responsibility (CSR) is sometimes regarded as a goal that should complement or replace shareholder primacy (section 2.4.13)[91] or at least be addressed by increasing environmental, social, and governance disclosure requirements.[92] Moreover, firms are encouraged to take into account the UN's Sustainable Development Goals (SDGs). While the proposed design principles can increase the sustainability of business and contribute to the attainment of the SDGs, design principles cannot work as a system unless they are connected to the same goal. For this reason, neither CSR nor the reaching of SDGs are proposed as design principles for the purposes of this book.

6.3 Strategic Design Principles

6.3.1 General Remarks

Based on the values laid down by the chosen policy principles, the strategic design principles set out the proposed actions in broad terms. Depending on the chosen values, one will thus end up with different strategic design principles.

We propose the following strategic design principles: interpret the interests of the company as the interests of the firm (section 6.3.2); focus on the function of controlling shareholders, minority shareholders and retail investors (6.3.3); foster long-termism (section 6.3.4); facilitate mutual trust complemented by pub-

89 See, for example, Johnsen DB (2019).
90 Mäntysaari P (2010a) p 12.
91 See, for example, Sénard JD, Notat N (2018) p 4: "La France compte en Europe et au niveau mondial, parmi les pays pionniers de la responsabilité sociale et environnementale des entreprises (RSE)." Schumer C, Sanders B (2019). Generally, see Fleischer H (2018d). See also Mäntysaari P (2012) section 6.3.3 on the problem of conflicting interests.
92 See, for example, SEC Release No. 33 – 10064, 34 – 77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K); Williams CA, Fisch JE (2018).

lic enforcement and the socialisation of enforcement costs (section 6.3.5); increase the number of firms with publicly-traded shares (section 6.3.6); reduce costs for issuers, controlling shareholders and retail investors (section 6.3.7); increase diversity (section 6.3.8); provide an alternative to financial intermediation (section 6.3.9); provide an alternative to venture capital (section 6.3.10); facilitate retail investors' direct investment in growth firms (section 6.3.11); use regulatory dualism (section 6.3.12); use market practices from angel funding and venture capital as a model for regulation (section 6.3.13); use best practices from SME market design as a model for regulation (section 6.3.14); ensure sufficient liquidity (section 6.3.15); complement retail investors' direct investment regime with access to low-cost investment funds (section 6.3.16), and complement retail investors' direct investment regime with a mandatory occupational pension system and social security (section 6.3.17).

These proposed strategic design principles complement each other, overlap, make each other stronger, and form a system. The list of proposed strategic design principles implicitly contains a recommendation to avoid overreliance on any particular trick. The list of proposals can be seen as the opposite of overreliance on any particular economic theory,[93] the opposite of so-called free market policies or market fundamentalism (section 1.4), and the opposite of overreliance on disclosures.[94]

Moreover, because of the size of the problem, the proposed strategic design principles focus on existing markets with large volumes and new markets that could grow large and help to provide reasonable long-term financial security for retail investors. For example, ICOs are not yet a real alternative to venture capital and IPOs.[95] The proposed strategic and operational design principles are based on the assumption that technological development will act as a driver of market development following a long-term trend (sections 2.2.3 and 2.4.12) and that market participants will use the available technology in the marketplace (section 6.4.16).

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93 Holmström B, Milgrom P (1987) pp 303–304: "Agents in the real world typically face a wider range of alternatives and principals a more diffuse picture of circumstances than is assumed in the usual models. Optimal schemes derived from a spare and approximate model of reality may perform quite poorly in the richer real environment."

94 See even SEC Release No. 34–86031 (Regulation Best Interest), p 5: "Regulation Best Interest establishes a standard of conduct under the Exchange Act that cannot be satisfied through disclosure alone."

95 See nevertheless Chiu IHY, Greene EF (2019) on the development of ICO markets for sustainable and social finance projects.

In the following, the proposed strategic design principles will often be illustrated with regulatory or corporate practices at the operational level for three reasons. The first is to show that many strategic design principles already exist. The second is to show that they can be and to some extent already are applied at the operational level. Moreover, the distinction can be a matter of taste.

6.3.2 Interpret the Interests of the Company as the Interests of the Firm

There will be fewer retail investors unless there are many good firms that pay decent wages for good jobs and make it possible for ordinary people to put money aside. Moreover, retail investors will not be able to invest directly in the publicly-traded shares of growth firms unless growth firms decide to issue shares and create a public market for them. There should be more companies with publicly-traded shares. For this to happen, we should focus on the interests of firms.

Now, legal entities such as companies are tools that states, firms and others have used to reach their objectives. In continental Europe, it is customary to distinguish between the legal entity and the firm (das Unternehmen, l'entreprise). While the legal entity is a tool, the firm of continental European company law is an organisation that uses such legal tools. The firm is not the same thing as the legal entity. Neither is it the same thing as the legal entity's shareholders.

While this distinction is not controversial in continental Europe, it can be more controversial in English-speaking countries and in neoclassical economics. No such distinction is made in common law jurisdictions. In the absence of this fundamental distinction, it has been customary in common law jurisdictions to assume that the interests of the company mean the interests of shareholders. The alternative seems to be balancing the interests of many stakeholders.[96]

To increase the number of firms that choose to have publicly-traded shares, and generally to enable firms to take rational and reasonable action in order to ensure their long-term survival in competitive markets, company and securities law should preferably distinguish between the legal entity and the firm and interpret the interests of the company as the long-term interests of the firm.

The definition of the firm obviously plays an important role. The firm means here an organisation and is used as an ideal type.[97] If the firm can have its own

96 See, for example, Eisenberg MA (1969) p 21 critically on managerialism as a way to achieve ends of social policy; Blair MM, Stout LA (1999) p 281 describing board members as “mediating hierarchs whose job is to balance team members' competing interests”, the team “including shareholders, executives, and employees”.

97 The term “ideal type” was coined by Max Weber. Weber M (1922).

interests, the first of them is its own long-term survival in a competitive environment (section 2.3.3).

In practice, the adoption of such a strategic design principle can lead to: the choice of the firm as the principal of the principal-agent theory; the need to facilitate the choice of agents whose actions can benefit the firm (the choice of board members, executives, shareholders, and other agents); and the need to align the interests of such agents with the long-term interests of the firm.[98]

It is in the interests of the firm to focus on the interests of its agents as well. The firm's agents should be made to act in the interests of the firm and have the incentives to do so. To increase the number of growth firms with publicly-traded shares, it would therefore be necessary to focus not only on the interests of growth firms but even on the interests of founders, controlling shareholders, and employees.[99]

What this also means is that shareholder primacy should be rejected as a design principle. The same can be said of balancing stakeholder interests. When shareholder primacy is rejected and replaced by fostering the interests of the firm, it is possible to explain the existence of boards even where board members do not represent shareholders, board members are not appointed by shareholders, shareholders are passive and disinterested, shareholders only use their voice by trading in shares, or there are no shareholders in the company form in the first place.[100]

98 See Mäntysaari P (2010a) section 8.2.5; Mäntysaari P (2012) section 7.3.

99 The Economist, Schumpeter, Life in the public eye, 22 April 2017: "The fact that fewer companies control the economy is a question for antitrust regulators. Whether young firms list their shares is entirely up to their owners."

100 Mäntysaari P (2010a) section 8.3; Mäntysaari P (2012) section 7.8. Related questions have recently been raised in the context of open-ended funds. Fox MB, Glosten LR, Greene EF, Patel MS (2018) p 25: "Ferrell and Morley … inquire as to whether boards of directors for mutual funds should be eliminated outright. Even if voting were eliminated, however, further thought and empirical inquiry is required before taking this further step. Maintaining the board means maintaining a group of persons who have fiduciary duties. So the key question for research is whether these fiduciary duties serve any useful purpose." See Ferrell A, Morley JD (2018) pp 331–336 and 343.

6.3.3 Focus on the Function of Controlling Shareholders, Minority Shareholders and Retail Investors

Company law should foster the interests of the firm (Unternehmensinteresse, l'intérêt social). The firm is a particular kind of organisation.[101] Limited-liability companies are legal entities that firms use as legal tools to reach their objectives (section 2.4.14).

While all legal entities do not have shareholders with limited liability, shareholders with limited liability are nowadays characteristic of limited-liability companies (section 2.4.3). The existence of shareholders in company law and their company law rights can be explained by their function for the firm. Shareholders exist because of their two main functions. From the perspective of the firm, shareholders can be sources of funding and suppliers of ancillary services (section 2.3.3).[102]

Shareholders can be sources of funding when they provide cash or non-cash assets. Only shareholders that subscribe for new shares issued by the company or buy shares directly from the company act as a source of cash. Shareholders tend to be a source of cash in start-ups. In large listed companies, most shareholders are not sources of cash, because they customarily buy shares in the secondary market only. New shareholders may nevertheless be a valuable source of non-cash assets in mergers and share exchanges (section 3.1).

While shareholders either are or are not sources of funding, shareholders are always suppliers of ancillary services, that is, services other than the mere provision of cash or non-cash assets.[103] Without these ancillary services, the long-term survival chances of the firm would be greatly reduced. This can be illustrated with the role of venture capital: "In the West, the role of the venture capitalist is not simply to provide cash. It's mentoring, plus introductions to a network of other investors, prospective acquirers, and new customers and partners, that makes the venture industry so valuable to a budding start-up. A good VC will help entrepreneurs build their companies."[104]

Since real shareholders possess different characteristics and have different interests, different shareholders can have different functions for the firm.[105]

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101 Chandler AD (1990) p 594: "At the core of this dynamic were the organizational capabilities of the enterprise as a unified whole. These organizational capabilities were the collective physical facilities and human skills as they were organized within the enterprise."

102 Mäntysaari P (2012) Chapter 10.

103 Mäntysaari P (2010a) section 8.7.2; Mäntysaari P (2012) section 7.9.

104 Senor D, Singer S (2011) Chapter 10. Generally, see Sahlman WA (1990); Gilson RJ (2003).

105 See, for example, Webber D (2018) pp 132–135; Bebchuk LA (2006).

For example, entrepreneurs and controlling shareholders can supply a wide range of ancillary services, and high-quality ancillary services are characteristic of venture capital. Even minority investors can have a function. For example, they can provide some kinds of monitoring services or, by trading in shares, valuation services.[106]

In order to give firms an incentive to choose the issuing of shares to the public and the public trading of shares, company law and securities law should (a) recognise the interests of the firm, (b) recognise the different functions of different shareholders, and (c) facilitate the provision of the full range of funding or ancillary services by the various kinds of shareholders.

The opposite of this approach is to assume that the firm does not exist, that the legal entity exists for the benefit of shareholders, that shareholders have identical characteristics, and that shareholders have no particular function for the firm. This is the case with the shareholder primacy approach.

6.3.4 Foster Long-Termism

Fostering long-termism is an important strategic design principle from the perspective of the firm. The fundamental interests of the firm such as its own existence and survival in competitive markets are long term. Access to patient capital and the choice of a long investment horizon can help firms survive especially in research-intensive and innovative industries.[107]

The firm can benefit more from long-term shareholders. Unlike short-term shareholders that sell their shares for short-term profit (exit), long-term shareholders have incentives to provide a broader range of services (voice) and services of better quality (loyalty).[108]

Generally, patience is a key driving factor behind economic development. Some countries are more patient than others. Variation in preferences is correlated with economic outcomes.[109] In the long term, a long investment horizon can benefit both firms and retail investors as well as society at large.

Since the purpose of the design principles developed in this book is to make it possible for retail investors to participate in the value generation of growth firms, we can start with the assumption that retail investors are worthy of protec-

106 Mäntysaari P (2010a) section 8.7.2; Mäntysaari P (2012) section 7.9.
107 Mäntysaari P (2012) p 137.
108 For the notions of exit, voice, and loyalty, see Hirschman AO (1970).
109 Falk A, Becker A, Dohmen TJ, Enke B, Huffman D, Sunde U (2018); Dohmen TJ, Enke B, Falk A, Huffman D, Sunde U (2015).

tion primarily as long-term shareholders. Moreover, having short-term shareholders can increase the agency costs of the firm, and having short-term controlling shareholders can increase the agency costs of other shareholders that rely on them.[110] There should thus be a balance between fostering long-term commitment on one hand and reducing perceived risk by facilitating exit on the other.

Implicit design principle. While fostering long-termism does not seem to be used as an express goal of company or securities law, it does seem to be an implicit design principle in many countries. In the past, various practices have been used to foster the long-term commitment of the board, management, and shareholders. These practices can relate to corporate governance, takeover defences, restrictions on the sale of shares, different classes of shares, and mechanisms to reward patient investors.[111]

First, the interests of the firm are long term. Long-termism is fostered by the duty to act in the interests of the firm, or in the interests of the company interpreted as the long-term interests of the firm rather than the interests of fictive or actual shareholders. This seems to the case in continental European company law (section 2.4.13). To some extent, there used to be a functional equivalent in the US. The irrevocable nature of the corporate charter (*Dartmouth College*), the practice of vesting all powers in the board, and direct share ownership contributed to the emergence of professional management (section 2.4.10)[112] and the managerial business model that lasted until the 1970s (section 2.4.12).

Second, long-termism and the long-term interests of the firm are fostered by the use of governance models that are self-enforcing and foster innovation (section 2.3.3).[113]

Third, one of the key aspects of self-enforcing governance models is the separation of share ownership, management, and monitoring. The separation of these functions can protect the firm and its management function against the practices of short-term shareholders (section 2.4.5).

The separation of these functions is characteristic of continental European company law. The German AG is an example of the use of such a governance model.

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110 For the funding-related agency costs of the firm, see Mäntysaari P (2010c) pp 16–17.

111 For an opposite approach, see nevertheless Antunes JE, Baums T, Clarke BJ, Conac PH, Enriques L, Hanak AI, Hansen JL, de Kluiver HJ, Knapp V, Lenoir N, Linnainmaa L, Soltysinski S, Wymeersch EO (2011) pp 37–38 on short-termism as a default rule.

112 Chandler AD (1977) pp 6–11.

113 See Mäntysaari P (2012) Chapters 8 and 9.

One may here note that there have been US proposals to adopt practices that reflect long-termism in continental European and EU law. For example, Justice Jacobs proposed a solution at the state law level: "It would amend the corporate statutes of Delaware and of other states (including the Model Business Corporation Act states) to give existing corporations the authority to adopt a charter provision abolishing yearly elections of directors. In place thereof, the board would be elected to serve for a longer period, such as five years.[114] During that period, the board could not be removed by shareholders except for cause.[115] Moreover, the directors would be authorized to adopt defenses against any takeover bids they view, reasonably and in good faith, as being contrary to the best interests of the corporation.[116] The objective would be to liberate the directors to manage the firm for the longer term required to create and develop the innovative products and services that would enable the American economy to become competitive again."[117] Interestingly, the proposal on the election and removal of directors resembles German law. The proposal on takeover defences resembles the Directive on takeover bids.

Fourth, as regards public takeover bids, the most important rule for the firm is the absence of a board duty to accept the bid. In the EU, the Directive on takeover bids[118] does not lay down any duty to accept a takeover bid. The target's board may thus say no.[119] Even in Delaware, the target's board has a right to defend the "corporate bastion" in the light of *Unocal* and *Revlon*.[120]

Fifth, company law has facilitated the use of block-holding, different kinds of shares, and various other kinds of structural takeover defences to shield management from short-term shareholders.[121]

It is customary to use different classes of shares. They can complement block-holding and pyramid structures. In Europe, the customary mechanisms that allow blockholders to enhance control by leveraging voting power include: multiple voting rights; non-voting shares (without preference); and non-voting

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114 Compare § 84(1) AktG on the management board and § 102(1) AktG on the supervisory board.

115 Compare § 84(3) AktG on management board members.

116 Compare Article 3(c), Article 9(5), and the first subparagraph of Article 9(2) of Directive 2004/25/EC (Directive on takeover bids).

117 Jacobs JB (2011) pp 1658–1659.

118 Directive 2004/25/EC of the European Parliament and of the Council of 21 April 2004 on takeover bids.

119 See Articles 3(1)(b), 3(1)(c) and 9 of Directive 2004/25/EC (Directive on takeover bids).

120 Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc. 506 A.2d 173 (Del. 1986); Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del. 1985).

121 Mäntysaari P (2010a) section 9.4.2; Mäntysaari P (2010c) Chapter 18.

preference shares.[122] In the US, the use of multiple classes of shares is customary in venture capital practice and tech company IPOs.

Sixth, some companies use mechanisms to reward patient investors. These schemes include additional dividends, additional shares, and additional voting rights. For example, companies can use loyalty shares to reward buy-and-hold investors.[123]

In France, the 2014 Florange law[124] amended the Code de commerce by introducing a rule that listed companies must grant double voting rights to investors who have held registered shares for at least two years unless two-thirds of shareholders have voted against this rule.[125] It would be legally possible to use loyalty shares even in many other countries.

Seventh, long-term commitment plays an important role in venture capital and IPOs. In venture capital transactions, key participants undertake to be committed for a period of time that reflects the duration of the business project. Contractual restrictions on the sale of shares are customary in venture capital practice. They are customary even in IPO practice. When shares are issued to the public, the perceived quality of the share issuing can depend on the use of lock-up clauses.[126]

Eighth, some of the prudential requirements for banks adopted in the EU after the financial crisis of 2007–2009 relate to corporate governance. The Directive on banking prudential requirements requires Member States to "ensure that the management body defines, oversees and is accountable for the implementation of the governance arrangements that ensure effective and prudent management of an institution, including the segregation of duties in the organisation and the prevention of conflicts of interest".[127] Moreover, the Directive requires sound remuneration policies. Banks must comply with principles such as the following: "the remuneration policy is consistent with and promotes sound and effective risk management and does not encourage risk-taking that exceeds the level of tolerated risk of the institution" and "the remuneration policy is in line with the business strategy, objectives, values and long-term interests of the institution, and incorporates measures to avoid conflicts of interest".[128]

122 ISS Europe, ECGI, Shearman & Sterling LLP (2007) section 1.2.1.1.
123 Bolton P, Samama F (2013).
124 LOI n° 2014–384 du 29 mars 2014 visant à reconquérir l'économie réelle.
125 Article L225–123 of Code de commerce.
126 Mäntysaari P (2010c) section 5.10.2.
127 Article 88(1) of Directive 2013/36/EU (Directive on banking prudential requirements).
128 Article 92(2) of Directive 2013/36/EU (Directive on banking prudential requirements). See also recital 63.

Ninth, long-termism can be supported by tax laws. For example, the EU IPO Task Force recommended in 2015 the provision of fiscal incentives for long-term investors as opposed to investors with a short-term trading view.[129]

In the light of these existing ways to foster long-termism one can draw the conclusion that fostering long-termism is implicitly accepted as a strategic design principle in company and securities law.

Attempts to reduce long-termism. This said, there are well-known attempts to reduce long-termism in company law and corporate governance.

Since the 1970s, higher institutional share ownership has gone hand in hand with shareholder primacy rhetoric under the financial business model of Wall Street capitalism in large US companies.[130]

There have been attempts to increase the influence of institutional or short-term shareholders in the EU as well. For example, while the European Commission's 2012 Action Plan on company law and corporate governance[131] recognised the existence of problems caused by the short-termism of shareholders in listed companies,[132] one of the main lines of action identified in the Action Plan was to give institutional shareholders more power.[133] The action plan therefore was likely to increase problems caused by institutional or short-term share ownership.

129 European IPO Task Force (2015) pp 57–58, Recommendation 5: "Improve tax incentives for investment into IPOs and equity more generally". Aim 5.2: "Provide tax incentives to encourage investment both for the longer-term and in Emerging Growth Companies". Recommendation 5.2.1: "Provide fiscal incentives for investors who take a long-term investment as opposed to short-term trading view: (e.g. no capital gains tax relief for holding for less than 12 months; staggered CGT relief on length of holding; exemption from CGT for illiquid Emerging Growth Company shares)".

130 See Jacobs JB (2011) p 1657.

131 Action Plan: European company law and corporate governance – a modern legal framework for more engaged shareholders and sustainable companies. Communication from the Commission, COM(2012) 740 final.

132 *Ibid.*, section 1: "[T]here is a perceived lack of shareholder interest in holding management accountable for their decisions and actions, compounded by the fact that many shareholders appear to hold their shares for only a short period of time."

133 *Ibid.*, section 1: "Engaging shareholders – shareholders should be encouraged to engage more in corporate governance. They should be offered more possibilities to oversee remuneration policy and related party transactions, and shareholder cooperation to this end should be made easier. In addition, a limited number of obligations will need to be imposed on institutional investors, asset managers and proxy advisors to bring about effective engagement."

Building on the 2012 action plan, the Shareholder Rights Directive (SRD II)[134] is designed to increase the powers of shareholders as monitors.[135] This is regardless of the recognition that "shareholders in many cases supported managers' excessive short-term risk taking" and the fact that "there is clear evidence that the current level of 'monitoring' of investee companies and engagement by institutional investors and asset managers is often inadequate and focuses too much on short-term returns".[136] Moreover, it is recognised in SRD II that "evidence shows that capital markets often exert pressure on companies to perform in the short term, which may jeopardise the long-term financial and non-financial performance of companies and may, among other negative consequences, lead to a suboptimal level of investments, for example in research and development, to the detriment of the long-term performance of both the companies and the investors".[137]

6.3.5 Facilitate Mutual Trust and Provide a Sufficient Enforcement Mechanism

We propose the strategic design principle of facilitating mutual trust. Generally, long-term relationships will not work without mutual trust. Firms are no exception to this main rule. The investment of human capital in the firm,[138] investment in people in complex tasks,[139] the separation of powers between different corporate bodies,[140] innovation work,[141] long-term and complex contracts,[142]

134 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.
135 Recital 3 of Directive 2017/828/EU (SRD II). See also Hopt KJ (2019a) II.3(c): "[T]he Directive reflects new dimensions of company law as discussed internationally, ie more emphasis is now on the shareholders, including institutional shareholders, as compared to the board. Whether the hopes placed on better corporate governance by shareholders are justified remains to be seen."
136 Recital 2 of Directive 2017/828/EU (SRD II).
137 Recital 15 of Directive 2017/828/EU (SRD II).
138 Simon HA (1991) p 30 on what motivates "real people in real organizations."
139 See Holmström B, Milgrom P (1991) on multidimensional tasks and multitask principal-agent problems. For more references see Mäntysaari P (2012) pp 7–8.
140 See Fama EF, Jensen MC (1983a) and Fama EF, Jensen MC (1983b) on the separation of work.
141 Belloc F (2012).
142 Jensen MC, Meckling WH (1976); Williamson OE (2002a); Williamson OE (2002b); Mäntysaari P (2010b) section 6.3.

capital investment,[143] and many other things require decisions based on mutual trust. If company law is to be reformed in ways that make it easier for more firms to issue shares to retail investors, company law probably should help to build mutual trust between minority shareholders, controlling shareholders, the board, and management.[144]

It can be hard to single out things that make a person trust somebody. Mutual trust is built on a patchwork of complementary things. In firms, things that help to build mutual trust probably include: a good and shared corporate culture; a good common goal; commitment; the alignment of interests during a long-term time horizon; an inclusive organisational structure; sufficient incentives; sufficient transparency; legal obligations; and an effective enforcement mechanism in the event of non-compliance.[145] It is proposed here that company law should define the common goal, facilitate a long-term commitment, provide for an inclusive organisational structure, provide for sufficient incentives and transparency, and provide for a sufficient enforcement mechanism. A sufficient enforcement mechanism includes even public enforcement and the socialisation of enforcement costs.

A common goal. If there are many good firms, society at large can benefit in the long run. This may help to explain why states passed general incorporation laws and adopted the normative system in the nineteenth century (section 2.4.2 and section 2.4.12).

Firms have many kinds of stakeholders. If company law primarily is designed to foster the long-term interests of the firm, most stakeholders will benefit in the long run. Therefore, this common goal can increase mutual trust.

The long-term interests of the firm are used as the common goal in German and French company laws. It is made possible by the fact that these laws distinguish between shareholders, the legal entity, and the firm (section 2.4.13). In contrast, there is no such distinction in Anglo-American company law.

The reception of neoclassical economic theory in company law is likely to reduce mutual trust. Neoclassical economic theory is based on the assumption that each individual rationally maximises his or her own economic benefits. Ex-

143 For the agency costs of shareholders and lenders, see Jensen MC, Meckling WH (1976). For the agency costs of the firm that raises funding, see Mäntysaari P (2010c) pp 16 – 17.

144 See also European IPO Task Force (2015) pp 54 – 55, Aim 2.3: “Promote investor confidence and understanding”. Aim 3.1: “Increase connectivity and encourage better dialogue between European companies and their investors, including end investors, both pre and post IPO”.

145 For common-pool resources as a special case, see Ostrom E (1990). For the management of agency, see Mäntysaari P (2010a) Chapter 6. For inclusive and exclusive governance models, see Acemoglu D, Robinson JA (2012).

ternalities do not matter. In reality, the fictive homogeneous shareholders of economic theory do not exist, shareholders have conflicting interests *inter se*, the interests of shareholders may not always be aligned with the interests of the firm, and externalities do matter.

Long-term commitment. Committed long-term employees, long-term managers, and long-term shareholders may become bound by shared interests. Moreover, they have reason to invest in better-quality information and personal relationships. Shared interests, better information, and personal relationships can increase the social glue between employees, managers and shareholders. Moreover, these factors can improve mutual trust, facilitate the long-term investment of resources, and increase long-term commitment in a virtuous circle. In contrast, short-term financial investors, short-term managers, and temporary workers lack a long-term commitment. The choice between long-termism and short-termism, therefore, can influence mutual trust.

Company law can improve long-term commitment in various ways. For example, company law can help to: protect management against short-term shareholders; foster sustainable risk-taking; foster long-term shareholding; and provide for an inclusive organisational structure, sufficient transparency, and sufficient long-term incentives (see below).

Inclusive organisational structure. Generally, inclusive organisational structures can bring benefits. Societies with inclusive political institutions can benefit from a virtuous circle but societies with extractive political institutions can face a vicious circle.[146] Even in firms, inclusive organisations are better at facilitating long-term commitment and mutual trust.

There are examples of inclusive organisational structures in company law. Generally, inclusive organisational structures use mixed monitoring. They can be part of a self-enforcing governance model.[147] Self-enforcing governance models generally require the use of collegiate bodies, the separation of functions, and mixed monitoring.

Mixed monitoring is characteristic of the traditional German AG with largely mandatory provisions of company law, a clear separation of functions between corporate organs, mandatory co-determination (Mitbestimmung) in the supervisory board, and, at least in the past, a close relationship with a house bank (Hausbank).[148] Mixed monitoring belongs to a larger societal cooperation culture

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146 Acemoglu D, Robinson JA (2012) pp 364–367; Senor D, Singer S (2011) Chapter 13.

147 Mäntysaari P (2012) Chapter 8.

148 Chandler AD (1990) p 398; Mäntysaari P (2012) section 8.4; Ringe WG (2015); Hopt KJ (2018) pp 273–274.

in Germany.[149] There are traces of mixed monitoring in the European Commission's 2012 Action Plan on company law and corporate governance.[150]

Examples of self-enforcing governance models include the governance model of the German AG and the governance model of a cooperative. Elinor Ostrom regarded self-organised enterprises such as cooperatives as examples of common-pool resources. At least some inclusive organisational structures can thus resemble Ostrom's common-pool resources.[151]

Sufficient transparency. Transparency generally is regarded as a good thing.[152] It reduces abuse and increases mutual trust. Transparency is regarded as a way to reduce agency costs, among other things.[153] Moreover, it facilitates mixed monitoring. The firm is likely to be more transparent for its stakeholders when its stakeholders take an active interest in the firm on a long-term basis and the firm has an inclusive organisational structure.

Transparency requires disclosures. On one hand, disclosures are regarded as necessary. For example, a common line of reasoning in the crisis management literature is that for the crisis response to be more successful, information must be disseminated quickly, directly, accurately and candidly to critical stakeholders.[154] On the other, disclosures are a complex phenomenon under normal conditions. Disclosures have two sides as they are produced and acted upon. They create costs on both sides. On the producer side, raw data must be collected, turned into an understandable text, and disseminated as disclosures. On the user side, disclosures must be followed, analysed, and acted upon. On either side, disclosures are only to a limited extent useful. There are externalities, because disclosures may be used against the firm by competitors and others, and against other stakeholders by the few stakeholders that have the best resources to follow, analyse, and act upon disclosures.

149 Chandler AD (1990) p 395: "Thus the cooperation that developed between and within industrial firms can be considered as part of a larger system, which Jürgen Kocka and other historians of the German economy have termed 'organized capitalism.'"

150 Action Plan: European company law and corporate governance – a modern legal framework for more engaged shareholders and sustainable companies. Communication from the Commission, COM(2012) 740 final, section 3.5: "The Commission believes that employees' interest in the sustainability of their company is an element that ought to be considered in the design of any well-functioning governance framework ... The Commission will identify and investigate potential obstacles to trans-national employee share ownership schemes, and will subsequently take appropriate action to encourage employee share ownership throughout Europe."

151 Ostrom E (1990).

152 Brandeis LD (1913).

153 See, for example, Jensen MC, Meckling WH (1976).

154 Pearson CM, Clair JA (1998) p 93.

Disclosures therefore are necessary but must be limited. Corporate disclosures cannot always be quick, direct, accurate, and candid. Disclosures should be limited because of their costs and limited usefulness on the producer side and the user side. Corporate transparency should be sufficient rather than "maximal" in the sense that disclosures should be reasonably useful to the firm and the legitimate users.

Internal disclosures are connected to the separation of corporate functions. To organise different corporate functions effectively, firms must organise the flow of information between different corporate bodies and the work process inside a corporate body. To ensure that internal disclosures are useful, internal disclosures must be either quick or slow and either confidential or open depending on the corporate body and the nature of the matter. Disclosures are slowed down by the fact that each disclosure must be based on analysed data and disseminated in a useful way, and by the fact that corporate bodies need to have scheduled meetings and cannot act upon a continuous flow of disclosures on an ad-hoc basis. Where disclosures are limited to a closed group of people with confidentiality obligations, more accurate and candid information can be disclosed.[155] Where disclosures are open, corporate bodies can only disclose less and less candid information without harming the firm.[156]

Public disclosures are connected to the protection of the firm, investors, and the public. Sufficient transparency reduces abuse, facilitates rational investment decisions, and increases mutual trust. Moreover, public disclosures facilitate mixed monitoring. In companies with publicly-traded shares, they facilitate monitoring as one of the ancillary services of shareholders. Public disclosures make it possible for shareholders to express their views in various ways ranging from the use of voice to exits.

Auditing requirements (section 2.4.6) and the public disclosure of financial information (section 2.4.7) have played an important role in the past as design principles intended to increase transparency.

However, since disclosures either are or are not useful for the relevant audience, all disclosures do not really increase transparency. First, the disclosure of too much or too detailed information can increase noise rather than transparency. Second, the choice of audience matters. Much of the regulation of issuer disclosures has focused on the knowledge interests of financial intermediaries rather than the knowledge interests of retail investors. Retail investors are ex-

155 See, for example, section 17(4) of Regulation (EU) No 596/2014 (MAR).
156 See, for example, section 17(1) of Regulation (EU) No 596/2014 (MAR).

pected to receive information from intermediaries.[157] For example, MiFID II lays down principles that investment firms must comply with when providing investment services to clients[158] and the Insurance Distribution Directive provides for similar obligations in the context of insurance distribution.[159] Third, some disclosures can lead to limited transparency designed to benefit one class of stakeholders at the expense of others (such as in dark pools, section 3.4.2). Fourth, the language of disclosures and the form of that language matter. For example, the SEC has required the use of "plain English" in the disclosure documents filed with the SEC.[160] In 1998, the SEC improved the readability of prospectuses by adopting Plain English Rules[161] and publishing a guide[162] showing securities lawyers and companies ways to reduce legalese.

To facilitate retail investors' direct shareholding, transparency can be increased by ensuring that the public disclosure of information primarily must be useful for retail investors rather than financial intermediaries (section 6.4.10).

Sufficient incentives. Transparency alone does not cure unwanted behaviour. Transparency should be backed up by good societal and corporate culture as well as sufficient incentives in the broad sense. While these incentives can be based on social and/or legal norms, there should be sufficient incentives under legal norms for members of corporate bodies to act in desired ways.

Mutual trust is increased by incentives that are aligned with the common goal. This again raises the question in whose interests corporate bodies must act (section 2.4.13). The question can be rephrased as a question of how to apply the agency theory in company law, since you need to choose the principal before applying the agency theory.

Where a certain stakeholder class is chosen as the sole principal and the incentives are designed accordingly, the incentives of all stakeholders are not aligned. They are not aligned, because the chosen principal lacks incentives to act in anybody's else's interests. However, the interests of all stakeholders can be aligned with the interests of the principal, if the firm is chosen as the princi-

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157 Mäntysaari P (2010a) section 10.4 on the management of incoming information.

158 Articles 24–25 of Directive 2014/65/ EU (MiFID II).

159 Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution (recast).

160 Fanto JA (1998c) pp 156–157.

161 Rule 421(d); SEC Release No. 33–7497 (Jan. 28, 1998) (Plain English Disclosure).

162 A Plain English Handbook: How to Create Clear SEC Disclosure Documents. By the Office of Investor Education and Assistance. U.S. Securities and Exchange Commission, Washington, DC, August 1998.

pal.[163] Whether the choice of the firm as the principal makes sense according to the "standard model" of corporate governance (section 2.4.11) is irrelevant.

To facilitate mutual trust by aligning incentives, the starting point should, therefore, be to regard the firm as the principal. Shareholders, managers, employees, and other stakeholders can be regarded as agents. The fundamental interests of the firm are long term.

A great deal of the incentive package for management and the workforce should consist of low-powered incentives rather than powerful financial incentives (Holmström and Milgrom 1994). Low-powered incentives encourage cooperation and can help to create a beneficial corporate culture and good social norms. The incentive design will need to include restrictions on the right to act. An essential part of the incentive design is the existence of a corporate bureaucracy.[164] In other words, rules matter and the regulation of corporate governance is an essential part of the low-powered incentive design (see section 2.3 for the matrix theory of company law).

This said, individual managers can have personal financial incentives to ask for high-powered short-term financial incentives aligned with the short-term interests of profit-maximising shareholders. While the management function and the interests of the firm are long term, the affiliation of an individual manager to the firm is short term, and managers can be in a position to choose a system that serves their own interests.[165]

An enforcement mechanism with public enforcement and the socialisation of enforcement costs. Part of the necessary incentive package in the broad sense is the existence of social norms and legal norms backed up by an efficient legal enforcement mechanism for legal norms.

Generally, legal norms should be complemented by effective sanctions in the event of non-compliance to ensure that the incentives of compliance are more powerful than the incentives of non-compliance. For example, there are no efficient compliance programmes without a mechanism for the enforcement of sanctions for non-compliance,[166] and sanctions for non-compliance belong to the five design principles of Ostrom's common-pool resources.[167]

In company law, the enforcement of sanctions is a problem regardless of the existence of sanctions for the breach of company law norms.[168] The first question

163 Mäntysaari P (2010a) section 8.2.5; Mäntysaari P (2012) section 7.3.
164 Holmström B, Milgrom P (1994) p 43.
165 See Bebchuk LA, Fried JM, Walker DI (2002); Holmström B, Kaplan SN (2003).
166 See, for example, Mäntysaari P (2010a) section 4.3.3.
167 Ostrom E (1990) pp 185–186; Mäntysaari P (2012) p 125.
168 See, for example, Mäntysaari P (2005) section 6.12.

is who will enforce them. Who will "guard the guardians"? The second question is who will be responsible for the costs. Will the costs be allocated to a minority shareholder seeking to enforce sanctions, to the company and socialised between all shareholders, to the state and socialised at state level, or the person or persons responsible for the breach? The third fundamental question is how to ensure that standards of review are more lenient than standards of conduct.

The board is not very keen on the enforcement of sanctions against board members. The board may not want to bring proceedings against top executives such as the CEO either, because top executives are monitored by the board and the board may have contributed to the problem by providing bad advice or bad monitoring.

Of all shareholders, controlling shareholders tend to have the best incentives and the opportunity to breach company law. A shareholder majority is not likely to enforce sanctions against controlling shareholders that often form the majority. In practice, controlling shareholders control or dominate the board and will not enforce sanctions against board members other than replacing them.

Minority shareholders may not have the financial incentives to bring proceedings for loss or damage sustained by the company and may lack the financial means to do so. In derivative actions, there is an inherent conflict between direct responsibility for costs and indirect share of potential benefits. It would seldom make economic sense to accept the full risks and costs for bringing proceedings in the hope of obtaining just a small economic share of the potential benefits. Moreover, this could lead to the negative selection of litigants. If the owner of a minor share block has a right to sue for breaches of company law, this right might be abused and the shareholder might blackmail the firm.[169]

If the rule is to allocate costs to the person or persons responsible for the breach, costs will in practice end up being socialised, because it is customary corporate practice to avoid the negative selection of members of corporate bodies by transferring the risk under D&O insurance policies. Without such risk transfer, membership in corporate bodies would attract reckless and ignorant people rather than diligent professionals.

Company law therefore should focus more on structures that increase compliance and make it less necessary to enforce sanctions in the first place, on mandatory enforcement when serious sanctions are triggered in non-routine cases, and on socialising part of the costs of the enforcement of serious sanctions in non-routine cases.

169 See, for example, Mäntysaari P (2005) section 5.10.3 on German experiences.

Company law can do many things to increase mutual trust by improving the enforcement of sanctions. In particular, company law can:
- improve duties by the use of mandatory provisions of law;
- improve duties by the use of key open norms (to change corporate culture and fill gaps) as well as specific key duties (to address the most common forms of unwanted behaviour);
- keep monitoring and management separate by providing for a two-tier board with a supervisory board and a management board;
- make it a legal duty for the supervisory board to bring proceedings against management board members that breach their duties at least in serious cases;
- authorise regulatory authorities to enforce sanctions against persons responsible for regulatory non-compliance in cases that trigger serious legal non-routine sanctions;
- use criminal sanctions against persons responsible for non-compliance in serious non-routine cases;
- socialise the costs of enforcement by allocating them to regulatory authorities or the company in serious non-routine cases.

This said, it is necessary to limit the enforcement of sanctions in company law (section 2.4.11). While standards of conduct and standards of review tend to converge and become one and the same in most areas of law, the two standards often diverge in company law for policy reasons. It is necessary to ensure that standards of review are more lenient than standards of conduct:[170]
- Since firms would not survive in the long run without considerable risk-taking, the board and management must be protected against the enforcement of sanctions when business decisions later turn out to be wrong.
- Standards of conduct can have functions that do not need to or cannot be complemented by legal sanctions. In particular, the function of standards of conduct is to facilitate a favourable corporate culture.
- Standards of review should not be too detailed and should have a limited scope. Too detailed standards of review with a large scope would give managers and board members incentives to focus on legal compliance rather than the actual business of the firm.

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170 Allen WT, Jacobs JB, Strine LE Jr (2001) p 868: "In most areas of law, standards of conduct and standards of review tend to conflate and become one and the same, but in corporate law the two standards often diverge. The reasons are rooted in policy interests ... In this review context, the business judgment standard ('rationality') diverges from, and becomes more lenient than, the normative standard of expected conduct ('reasonableness')."

Particular design principles can help to solve the trade-off problem when one chooses to apply more lenient standards of review and limit the enforcement of sanctions.[171]

6.3.6 Increase the Number of Firms with Publicly-Traded Shares

It is difficult for retail investors to make direct equity investments unless more firms choose to have publicly-traded shares. Company and securities law should, therefore, help to increase the number of companies with publicly-traded shares.[172]

Whether rational firms choose to have publicly-traded shares can depend on whether it is in their interests to do so. The choice can depend on costs, benefits, and risks. Whether founders and controlling shareholders make it happen can depend on whether it is in their interests to do so.

Because of major economic trends, it would be really hard to increase the number of growth company IPOs and stock exchange listings. One of the main reasons why firms are not going public is that independent companies tend to have a higher valuation in a trade sale[173] or a private equity takeover. Profit-maximising financial investors will not choose an IPO unless more profitable exit alternatives have failed. It would not be meaningful to take negative actions such as limit international capital flows, M&A activity, the business of venture capital firms, or the business of private equity firms. Positive actions would be more feasible.

To increase the number of firms with publicly-traded shares, rulemakers should focus on the interests of firms and such controlling shareholders that perhaps do not want to maximise their own short-term wealth but prefer to build the firm on a long-term basis. Controlling shareholders may prefer to build the firm even for quite reasonable non-financial reasons.[174] Rulemakers should thus focus on reducing relevant costs relating to the public trading of shares for the firm and controlling shareholders (section 6.3.7). In contrast, controlling

171 See *ibid.*, pp 869 – 870.
172 Clayton J (2019): "I believe this situation—both the public hand and the private hand—should be addressed. We should: (i) increase the attractiveness of our public capital markets as places for companies to raise capital, and (ii) increase the type and quality of opportunities for our Main Street investors in our private markets."
173 Gao X, Ritter JR, Zhu Z (2013).
174 See also FESE (2015) pp 4 – 5 proposing a greater focus on the end-users of capital markets and the core function of capital markets to finance growth.

shareholders that prefer to maximise their own profits in the short term will not choose a public listing unless more profitable exit alternatives fail.

Stock exchanges can be described as two-sided platforms with issuer-firms on the supply side and investors on the demand side (section 8.2). Stock exchanges provide services to both sides. Since we want more companies with publicly-traded shares, the question here is how to increase the supply side. Regulators should improve the service product on the supply side. Improving the service product on the side of investors would not help, because there is no shortage of potential investors. For example, increasing the rights of institutional investors or the speed of trading would be unlikely to increase the number of listed companies.[175]

6.3.7 Reduce Costs for Issuers, Controlling Shareholders and Retail Investors

Costs should be reduced for issuers, controlling shareholders, and retail investors. Companies will probably issue more shares to the public, and retail investors will subscribe for more shares, if their respective costs are low.

What is recognised as a relevant cost depends on the chosen theory (such as transaction cost theory or agency theory) and the chosen perspective (such as less than optimal general welfare, costs incurred by shareholders, or costs incurred by the firm).[176] Theory and perspective matter.[177]

Different perceptions of costs. There can be different perceptions of costs depending on the choice of theory and perspective.

First, there are transaction costs.[178] Reducing transaction costs is one of the traditional goals of company law, securities law, and the regulation of stock exchanges. The role of exchanges[179] and financial intermediaries in reducing transaction costs has been the textbook motivation for the regulation of capital mar-

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175 For example, see Gadinis S (2008) on how trading by institutional investors is influenced by regulation in the EU v. the US.

176 For Management-Based Commercial Law (MBCL), see Mäntysaari P (2012) Chapter 4 and Mäntysaari P (2017) section 7.5.5. The point of view of MBCL is to study how firms can use legal tools and practices to reach their objectives in different contexts. In all transactions, firms are assumed to manage costs, risk, principal-agency relationships, and information.

177 See, for example, European IPO Task Force (2015) p 53, Aim 1.3: "Revise EU financial regulation to reduce administrative costs by 30 – 50 %". Recommendation 1.3.1: "Redefine the purpose of EU capital market regulation to serve the end users, being both companies and investors".

178 Coase RH (1937); Coase RH (1960).

179 Coase RH (1988) p 9.

kets in the interests of financial intermediaries.[180] The customary ways to reduce transaction costs have included standardisation, the separation of retail markets and wholesale markets,[181] the use of exchanges and central counterparties, the concentration of marketplaces, and digitalisation (section 3.2.5). While the need to reduce transaction costs is regarded as uncontroversial, it would also be necessary to take into account the perspective, that is, whose transaction costs we are talking about. Moreover, costs obviously are not limited to transaction costs.

Second, the relevance of costs depends on whether one chooses the perspective of the operator of a marketplace, the homogenous and fictive shareholders of economic theory, institutional investors, retail investors, controlling shareholders, other stakeholders, or the firm. For example, funds distributed to shareholders are a cost from the economic perspective of the firm but not a cost from the economic perspective of the shareholder that receives them. The overall costs of financial intermediation seem to be too high for retail investors and non-financial firms (Chapter 1), but these costs are not a cost for financial intermediaries. Financial intermediaries prefer to increase their revenue and do not bear the societal costs of financial intermediation, because such costs are externalities allocated to other parties or socialised.

Third, the relevance of costs can depend on how the agency theory is applied. One can choose different principals and agents. From the perspective of the firm, shareholders have a function and can be regarded as agents that provide services. The fact that shareholders can be good or bad in providing services to the firm means that the firm will incur agency costs depending on the quality of shareholders.[182]

180 See, for example, Mishkin FS, Eakins SG (2012) p 64: "Financial intermediaries can substantially reduce transaction costs because they have developed expertise in lowering them and because their large size allows them to take advantage of economies of scale, the reduction in transaction costs per dollar of transactions as the size (scale) of transactions increases."

181 Merton RC, Bodie Z (2005) p 6: "In reality most investors face substantial transactions costs and cannot trade even approximately continuously. But in a modern, well-developed financial system, the lowest-cost transactors may have marginal trading costs close to zero, and can trade almost continuously." For the separation of these markets in EU securities law, see Mäntysaari P (2010a) section 10.4 and 10.7.

182 For the agency costs of funding from the perspective of the firm, see Mäntysaari P (2010c) section 2.4 pp 16–17 (claim dilution, withdrawal of funding, investor substitution, insufficient effort, and unwanted use of discretion). For liquidity management, risk management, and capital structure as three dimensions of corporate financing, see Holmström B, Tirole J (2000). For agency costs from the investor perspective, see Jensen MJ, Meckling WH (1976). Mainstream corporate governance theory focuses on reducing agency costs for shareholders. If one chooses

Fourth, many costs that are difficult to measure might not be regarded as relevant in the first place.[183] For example, the societal costs of inequality and political polarisation, costs in the form of pollution and damage to environment, and costs allocated to workers are not taken into account in company and securities law, and the use of quantitative methods can lead to a simplified view on reality as the equations are based on a limited choice of costs and benefits.[184]

In Europe, current regulatory reform plans focus on reducing some costs. In its CMU action plan, the European Commission mentioned the following costs: costs incurred by investors due to restrictions on the cross-border activity of investment funds;[185] costs incurred by issuers due to prospectus requirements;[186] and costs incurred by companies due to paper-based formalities.[187] In a 2017 consultation document, the Commission asked how fintech could be used to reduce costs and improve processes.[188] However, the CMU action plan neither identifies nor recognises the costs that are the most important costs for the purposes of this book.

If the goal is to increase the number of firms with publicly-traded shares and retail investors' direct share ownership, it is necessary to reduce the relevant costs for non-financial issuer-firms, their controlling shareholders, and retail investors. We can have a look at these costs and ways to reduce them.

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mainstream shareholder primacy with shareholders as the principal, shareholders do not give rise to any agency costs. This view is rejected in this book.

183 See, for example, Reich RB (2015) p 73 on the public's mounting distrust of the entire economic system.

184 Holmström B, Milgrom P (1987) p 304: "Optimal schemes derived from a spare and approximate model of reality may perform quite poorly in the richer real environment." See also Andy Wachowski, Larry Wachowski, The Matrix Revolutions, a 2003 science fiction movie: "ORACLE: Please... You and I may not be able to see beyond our own choices, but that man can't see past any choices. NEO: Why not? ORACLE: He doesn't understand them – he can't. To him they are variables in an equation. One at a time each variable must be solved and countered. That's his purpose: to balance an equation."

185 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 4.2: "Many respondents to the consultation argued that a number of factors restrict cross-border activity of these funds, including discriminatory tax treatment, varying national requirements on the marketing of funds and fees for cross-border notifications."

186 *Ibid.*, Chapter 2.

187 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, pp 25–26.

188 European Commission (2017d).

Controlling shareholders. Controlling shareholders use their legal or de facto powers to control the firm. Controlling shareholders' benefits can be either direct or indirect, and either private or shared by other shareholders.

The existence of controlling shareholders can be in the interests of the firm in the light of the fact that controlling shareholders provide important ancillary services (and may even be a source of cash). Whether the controlling shareholders' benefits are private or shared by other shareholders says nothing about whether these benefits are beneficial, harmful, or neutral from the perspective of the firm.[189]

If the company has controlling shareholders, controlling shareholders can block the issuing of shares to retail investors. They may block it if they believe that the issuing of shares to retail investors is not in the interests of the firm, if the issuing means that controlling shareholders will lose control, or for other reasons.[190]

To give controlling shareholders incentives to opt for the issuing of shares to retail investors, company and securities law should facilitate block-holding as the controlling shareholders' corporate governance tool (that is, help controlling shareholders keep control of the company),[191] and limit minority shareholders' governance rights (that is, prevent them from blocking decisions and reduce their rights to bring proceedings against the company and take derivative action).[192]

Retail investors. In addition to the price payable for shares, retail investors can incur direct costs for investing in shares, agency costs (as retail investors rely on controlling shareholders and management to act in retail investors' interests), direct costs for access to the marketplace, transaction costs for trading in shares, costs for illiquidity, and costs caused by bad investment or trading decisions.

These costs can be reduced in various ways to make it easier for retail investors to invest in shares. For example, costs for illiquidity obviously can be reduced by ensuring sufficient liquidity (section 6.3.15) and costs caused by bad investment decisions can be reduced by making it easier for retail investors to take rational and reasonable investment decisions (section 6.4.10).

Retail investors' agency costs can be reduced by mandatory provisions of law. Such mandatory provisions of law can be based on mechanisms historically employed in continental European company law and customarily employed in

189 Mäntysaari P (2010a) section 9.2.6, p 218.
190 See, for example Hill J (2021) section 2.1 p 20 on founders.
191 *Ibid*., section 9.4.
192 *Ibid*., section 9.5.

market practice. There are comparable agency relationships in limited partnerships (section 2.4.3) and venture capital investments that are based on voluntary contracts between the parties (sections 5.3 and 6.3.13).

In particular, such mandatory provisions of law can:

- lay down a duty to act for a common purpose (lay down a duty for controlling shareholders, the board, and management to act in the interests of the firm);
- lay down some red-line rules (prohibit practices and forms of abuse most harmful for retail investors);
- align interests (align the interests of controlling shareholders with the interests of retail investors, provide for the equal treatment of shareholders, pre-emptive rights, and tag-along rights);
- ensure that the governance model is self-enforcing to ensure that retail investors do not need to participate in monitoring (require the existence of different corporate bodies and provide for the separation of powers); and
- provide for a sufficient enforcement mechanism (with mandatory laws complemented by penal sanctions and enforcement by public authorities).

The issuer-firm. Firms with publicly-traded shares incur direct costs for the marketplace (such as admission fees and annual fees or fees for trading volume), compliance costs, and agency costs. The high cost of regulatory compliance is one of the factors that have reduced the number of listings and companies with publicly-traded shares.[193] Moreover, firms probably incur much higher agency costs than is customarily assumed. Firms' costs can be reduced in many ways.

First, regulators should reduce the firm's agency costs when it has publicly-traded shares. The firm's agency costs should be reduced by mandatory provisions of law.

The role of agency costs for firms has not been properly understood in mainstream company law and corporate governance research in which the firm is neither regarded as a principal nor assumed to incur any agency costs whatsoever.

From the perspective of the firm, a stock exchange listing facilitates the provision of shareholders' services. Shareholders provide two kinds of services. Shareholders can be a source of funding or suppliers of ancillary services.[194] Shareholders' company law rights facilitate, in particular, the supply of share-

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193 Gao X, Ritter JR, Zhu Z (2013).

194 See, for example, Kahle KM, Stulz RM (2017) p 80 on the US "net issuance": "In general, smaller firms issue equity and larger firms repurchase more shares than they issue."

holders' ancillary services. The same can be said of the regulation of corporate governance and mandatory disclosures.

Regulation can help to increase the quality of shareholders' services that the firm relies on and reduce their cost to the firm. In particular, regulation can facilitate a culture that fosters the interests of the firm and require corporate governance practices that are in the interests of the firm. For example, a legal duty to act in the long-term interests of the firm (Unternehmensinteresse, l'intérêt social) is more likely to foster the broad long-term interests of the firm, and a legal duty to act in the narrow interests of a particular class of stakeholders (such as shareholders or employees) is less likely to foster the broad long-term interests of the firm (section 2.4.13). The organisational separation of functions is more likely to foster the long-term interests of the firm, and the lack of the separation of functions is less likely to do so (sections 2.4.5 and 2.4.10).

Second, regulators can generally reduce the duties of companies that issue shares to the public and the duties of companies with publicly-traded shares (sections 2.4.7 and 6.4.2). Interestingly, the European Commission's CMU action plan of 2015 does not address the wide range of issuer duties. Therefore, the action plan might not go far enough to increase the number of companies with publicly-traded shares.

Third, regulators can make direct listings easier (section 6.4.2). It is characteristic of a direct listing that it is not a way for the company to issue new shares and that it foregoes the traditional underwriter.[195] A direct listing could therefore be cheaper than an IPO.[196] A direct listing customarily is preceded by private placements.[197] Silicon Valley bankers and lawyers seem to push for direct listings as an alternative to IPOs.[198] SPACs are a functional equivalent to direct listings or reversed takeovers but costly for investors.

Fourth, one can distinguish between different kinds of companies or issuings and exempt particular categories from the general duties of companies that issue shares to the public.[199] The Jumpstart Our Business Startups (JOBS)

195 Horton BJ (2019) p 182.

196 *Ibid.*, p 185.

197 See *ibid.*, pp 186–188.

198 Miles Kruppa, SEC opens debate on finding alternatives to IPOs. US markets regulator hears arguments for enabling direct listings to raise capital. Financial Times, 17 October 2019.

199 European IPO Task Force (2015) pp 52–53, Recommendation 1: "Create a more flexible regulatory environment for small and mid-cap quoted companies, also known as 'Emerging Growth Companies', including lowering the barriers to entry and the cost of equity capital." Aim 1.1: "Encourage a diverse and attractive funding base in European public markets for companies of all sizes". Recommendation 1.1.1: "Provide companies with access to different regulatory, administrative & fiscal environments appropriate to their financing needs at different stages of growth".

Act of 2012 is an example of this approach in the US (section 4.5). In the EU, however, the fact that securities law is harmonised on a piece-meal basis makes it rather difficult to understand the scope of the regulatory regime. When one moves from clear cases at the core of the regime to more diverse cases in the fringes, the scope of the regulatory regime will in practice have to be determined in each particular context on the facts of the case. The piece-meal approach is reflected in the scope of exemptions as well. For example, the Prospectus Regulation provides for various kinds of exemptions[200] and permits the use of an EU Growth prospectus by SMEs and even by non-SMEs under certain circumstances (section 6.4.4).[201]

Fifth, one can distinguish between different kinds of regulated markets with at least one market subject to a regulatory regime that is less costly for issuers.[202] For example, MiFID II distinguishes between "regulated markets",[203] "multilateral trading facilities",[204] and "organised trading facilities".[205] In 2014, MiFID II introduced "SME growth markets" as a new sub-category within the category MTF.[206] SME growth markets are subject to lighter regulatory requirements.[207]

Sixth, one can create new and more attractive ways to organise public trading in shares. This would be a good place for radical innovation.

From the perspective of the firm, the choice of the way to organise public trading in shares really is a question of "make or buy".[208]

Aim 1.2: "Promote the concept of 'Think Small First' in EU financial regulation affecting Emerging Growth Companies". Recommendation 1.2.1: "Support alternative exchange markets (SME Growth Markets) with more flexible and calibrated financial regulation affecting Emerging Growth Companies".

200 First subparagraph of Article 3(2) of Regulation 2017/1129 (Prospectus Regulation).

201 First subparagraph of Article 15(1) of Regulation 2017/1129 (Prospectus Regulation). For the definition of SMEs, see point (f) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).

202 European IPO Task Force (2015) pp 52–53, Recommendation 1 and Recommendation 1.2.1.

203 Point (21) of Article 4(1) of Directive 2014/65/EU (MiFID II).

204 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II).

205 Point (23) of Article 4(1) of Directive 2014/65/EU (MiFID II).

206 Point (12) of Article 4(1) of Directive 2014/65/EU (MiFID II).

207 See Article 33(3) of Directive 2014/65/EU (MiFID II). See nevertheless Article 33(4) of Directive 2014/65/EU (MiFID II): "The criteria in paragraph 3 are without prejudice to compliance by the investment firm or market operator operating the MTF with other obligations under this Directive relevant to the operation of MTFs. They also do not prevent the investment firm or market operator operating the MTF from imposing additional requirements to those specified in that paragraph."

208 For make or buy generally, see Coase RH (1937).

In the past, companies have outsourced the operation of marketplaces for their shares to various kinds of financial intermediaries ("buy"). For example: shares can be traded OTC; shares can be traded on a stock exchange (section 3.2); a broker-dealer or an investment firm can operate a dark pool or act as a systematic internaliser for shares (sections 3.3.3 and 3.4);[209] or the primary market for a start-up's shares could be organised by the operator of a crowdfunding platform (Chapter 7).

However, few firms prefer the existing outsourcing alternatives. Almost all firms in the world remain private. There is a trend of small and medium-sized growth firms being taken over by large firms. High costs, access to venture capital, and trade sales are rendering stock exchanges increasingly obsolete for many firms.[210]

In the future, there would certainly be enough technology available to create, for example, a social media platform for trading in shares. Such an alternative could help to circumvent stock exchanges, broker-dealers, and investment firms.

Moreover, there might be enough know-how to create a marketplace for each company to organise a marketplace for trading in its shares internally. There should be room for integration ("make") as an alternative to the outsourcing of the marketplace function.

The platform model of doing business and the "make" alternative for organising trading in shares might merge if firms were permitted to organise trading in their shares internally by using cloud-based technology services (Chapter 8).

Such potential new external or internal trading platforms could provide a way to reduce the firm's overall costs for public trading, provide an alternative to venture capital and trade sales, enable retail investors to invest in shares issued by growth firms in the early expansion phase, increase the free float of shares, and make it easier for more successful firms to choose trading on a regulated market in the long run. The "make" alternative and new kinds of alternative

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209 Recital 17 of Directive 2014/65/EU (MiFID II): "While trading venues are facilities in which multiple third party buying and selling interests interact in the system, a systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue." Systematic internaliser is defined in point (20) of Article 4(1) of Directive 2014/65/EU (MiFID II).

210 See also Sobel R (1977) pp 220 – 221: "[T]he major economic function of Wall Street today is the channeling of funds from investors to new and old companies, and it is here that the underwriters become vital … The underwriter raises money for the company whose securities he is selling, while the trustee invests money for those who seek income and capital gains … If and when the two gigantic forces do come together – when entire underwritings are taken by trustees – the stock exchanges will become obsolete."

marketplaces could thus help to increase the number of stock exchange listings in the long run.

6.3.8 Increase Diversity

We propose to increase diversity as a strategic design principle. Regulators should focus more on the diversity of the ecosystem to increase competition, growth, and the resilience of financial markets.

In the past, several policy objectives have reduced the diversity of stock markets. For example, the EU has focused on the integration of European national markets, the creation of an internal market, and ensuring a level playing field for market participants.[211] In this way, EU law was expected to increase both economies of scale and competition. However, narrow regulatory objectives and reduced diversity can also hamper parts of the economy. A one-size-fits-all regulatory regime mainly designed with financial intermediaries and large firms or issuers in mind may reduce the number of small issuers, increase concentration, reduce competition, and hamper economic growth.

The proposal to increase diversity is perhaps not new. For example, a greater diversity of ecosystems was proposed as one of the main goals of the Capital Markets Union (CMU) by the Federation of European Stock Exchanges (FESE): "FESE members have operated successful models catering to smaller companies that combine their long experience serving their communities with new creative solutions. However, other institutions (such as small and mid-cap accountants, brokers, advisers, analysts, lawyers, etc.) are also needed to facilitate companies' access at the local and regional levels … [T]hese services catering to SMEs are disappearing … EU policies can make a difference in preventing a further erosion of the local and regional ecosystems. This requires policies that sustain the full spectrum of institutions serving smaller companies and their investors … Keep-

211 FESE (2015) p 3: "In the initial 10 – 15 years of building the Single Market, the EU concentrated on policies that would foster the integration of its national financial sectors in order to create one united European market that would be efficient, deep, and competitive (e.g. in the image of the US market). The intention to integrate equities markets resulted in a major focus on reducing the transaction costs of trading of the largest stocks ('blue chips') which, it was assumed, would lower the cost of accessing capital markets (but there was no systematic measurement of the net effects on end-users in the real economy). Cross-border competition was the main tool to increase efficiency as experienced by the financial services industry. There was also limited discussion on what impact trading would have on the conditions for listing faced by companies, especially smaller ones."

ing these ecosystems alive and fully effective must be the main goal."[212] In the US, Mahoney and Rauterberg have recently suggested that a Regulation NMS reform could encourage competition between exchanges by letting different exchanges choose different kinds of trading mechanisms.[213]

6.3.9 Provide an Alternative to Financial Intermediation

We propose the development of alternatives to financial intermediation as a strategic design principle.

Today, the lack of direct and liquid investment opportunities forces retail investors to turn to financial intermediaries and invest in fund shares or insurance policies.[214] This is likely to increase the income and wealth of financial intermediaries at the cost of retail investors. In the absence of alternatives to the use of financial intermediaries, financial intermediaries can extract rents (section 1.3).

The super-rich can avoid middlemen by using family offices.[215] Reducing the cost of financial intermediation is more difficult for retail investors. While the advancement of index funds and fintech may help, the emergence of alternatives to financial intermediation as a whole will require changes in regulation. The regulatory framework for financial intermediation should leave room for alternatives.[216] There will be no alternatives to financial intermediation if all functional equivalents fall within the scope of the same regulatory framework designed to enhance the business of financial intermediaries (section 6.3.12).

Not only retail investors but even non-financial firms may need an alternative to financial intermediation. Stock exchanges and venture capital funds are financial intermediaries that force firms to comply with particular external standards. Since the number of companies with publicly-traded shares is low, these standards do not seem to be aligned with the interests of a sufficiently

212 *Ibid.*, pp 4–5.

213 Fox MB, Glosten LR, Greene EF, Patel MS (2018) pp 23–24; Mahoney PG, Rauterberg GV (2018) pp 272–273.

214 See, for example, Auerbach J, Hayes SL (1986) p 1: "[T]oday individuals are a much reduced source of direct investment funds. Individual investors are now largely represented through pension funds, professional managers, trust departments, investment companies, and employers' savings and profit-sharing plans."

215 The Economist, Leaders. How the super-rich invest, 15 December 2018.

216 See even European IPO Task Force (2015) pp 53–54, Recommendation 2: "Relax constraints that restrict investors' ability to access IPO markets & to invest in venture capital / private equity". Aim 2.1: "Create a single market for retail investors to directly access public equity markets cross-border in Europe (in addition to investment with financial intermediation)".

large number of firms. One can think of new ways for firms to raise equity capital, organise public trading in shares, and obtain the ancillary services of shareholders. The existence of alternative regulatory regimes could benefit not only small and medium-sized firms but even large enterprises.

In company law, the benefits of alternative regulatory regimes have contributed to the existence of many alternative company forms and competing regulatory regimes. Choice and the number of available company forms and regulatory regimes have been increased by rules on the recognition of foreign company forms (sections 2.4.4 and 2.4.9).

In securities law and the regulation of stock exchanges, however, the trend has been the convergence and increasing scope of regulatory regimes with less regulatory choice for market participants. There is a fundamental difference between company law on one hand and securities law and exchange law on the other in this respect.[217] The latter should leave room for more choice.

6.3.10 Provide an Alternative to Venture Capital

We propose the strategic design principle of providing an alternative to venture capital. It would be important to provide an alternative not only to financial intermediation in general but even to venture capital in particular.

The business model of venture capital has been very successful in the past. Managers of venture capital funds have connected wealthy investors with a portfolio of private growth firms in need of plenty of equity capital. Institutional investors and wealthy individuals have turned to venture capital, private equity, and hedge funds because of low interest rates and the scarcity and high valuations of publicly-traded stocks. Growth firms may need the core and ancillary services of venture capitalists. Because of the superiority of such services and the lack of alternatives, venture capital has largely replaced other sources of funding for successful growth firms. Venture capitalists look for a profitable exit customarily in the form of a trade sale. The rise of venture capital is widely regarded as one of the causes of the decline in IPOs in recent years.

The European Commission wants to increase venture capital.[218] In 2015, the EU IPO Task Force recommended relaxing constraints to investors' ability to ac-

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217 See Romano R (1998).

218 The European Commission wants to increase venture capital. Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.2: "Venture capital has a key part to play in supporting growth and offering entrepreneurs an op-

cess IPO markets and to invest in venture capital or private equity and chose, as one of its policy aims, the creation of a more level playing field between packaged and non-packaged products available to retail investors.[219]

However, retail investors customarily do not have access to venture capital funds. Neither do they have access to shares issued by private companies. In the long term, retail investors may end up relatively poorer unless they get a chance to participate in an alternative to venture capital and invest in shares issued by growth firms in the early expansion phase[220] – or at least in the publicly-traded shares of many more companies that have found an alternative to venture capital.

To increase the number of companies with publicly-traded shares and retail investors' direct investments in the shares of growth firms, there should be an attractive alternative to venture capital. Such an alternative will not work unless founders, growth firms, and even providers of advisory services such as law firms find it attractive.[221]

Some founders and growth firms might prefer an alternative for various reasons. First, venture capital is not always available. Most funding proposals are turned down. Access to venture capital may depend on the stage, sector, and location of the project.[222] The network effects that venture capitalists like are not created in all businesses. Venture capital funding may even dry up and start-ups that have been able to raise venture capital in the past might not be able to do so in the future.[223] Moreover, the venture capital boom may not last forever.[224] Sec-

tion to raise funding in Europe as well as from overseas … However, EU venture capital funds remain relatively small."

219 European IPO Task Force (2015) pp 53–54, Recommendation 2: "Relax constraints that restrict investors' ability to access IPO markets & to invest in venture capital / private equity". Aim 2.1: "Create a single market for retail investors to directly access public equity markets cross-border in Europe (in addition to investment with financial intermediation)". Recommendation 2.1.3: "Create a more level playing field between packaged and non-packaged products available to retail investors".

220 The CMU action plan focuses more on increasing EU venture capital funds. Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.2.

221 For the core and ancillary services of start-up lawyers, see Suchman MC, Cahill ML (1996); Coyle JF, Green JM (2017). See also Coyle JF, Green JM (2017) p 1419 on how New York lawyers choose their customers.

222 Ibrahim DM (2015) pp 561–563. See also Kitty Knowles, After years of neglect, femtech is getting substantial investment. Financial Times, 23 March 2020.

223 See Kenney M, Zysman J (2019); The Economist, Unicorns in winter, 9 March 2019.

224 See, for example, Rana Foroohar, I joined a tech start-up in 1998. What could go wrong? Financial Times, 18 October 2019: "At the end of 2018 VC investment into tech firms surpassed

ond, there is a lack of alternatives for the funding of growth firms after angel funding rounds. An IPO and a stock exchange listing customarily cost too much for a growth firm. Third, some founders may prefer to unbundle the services provided by venture capital investors. Venture capital is often used because of ancillary services such as advice. Some founders may not need the ancillary services of venture capital investors or want to unbundle the cash and ancillary service components.[225] Fourth, some founders may not like the control aspects of venture capital or other customary characteristics of venture capital (section 5.3). Venture capital investors prefer control. Angel investors may in some cases provide enough funding under a relatively simple contractual framework that leaves founders more discretion[226] and makes it easier to sell the company earlier in a smaller-scale trade-sale exit.[227] New alternatives to venture capital might provide more management discretion.

The existence of alternatives would increase competition and force venture capital to change. There is evolution of venture capital as well.[228]

One may ask whether crowdfunding platforms (Chapter 7) and SME exchanges (section 3.5) could help to create alternatives to venture capital. This seems unlikely. Both crowdfunding and SME exchanges have their drawbacks. The most promising firms do not seek equity crowdfunding. While some SME exchanges have been successful, SME exchanges as feeders for main markets generally have failed to sufficiently increase the number of listed companies in the world.[229] Venture capital and trade sales are rendering both traditional and SME stock exchanges obsolete for many firms. There could be potential demand for new kinds of marketplaces (section 6.4.13).

the dotcom bubble, and has since begun to fall." See also The Economist, Exit unicorns, pursued by bears, 4 April 2020: "The gospel of growth at all cost has gone out of the window."

225 Ibrahim DM (2015) p 590: "A strong entrepreneurial team might be able to guide a cash-efficient startup from launch to a quick sale without much professional help."

226 Ibrahim DM (2013) p 252.

227 *Ibid.*, p 259.

228 The Economist, Schumpeter. A new Tiger in town. How a hyperactive technology fund is changing Silicon Valley, 26 June 2021; Miles Kruppa, SoftBank's second Vision Fund speeds up pace of investment. Financial Times, 11 July 2021.

229 OECD (2015c) p 126.

6.3.11 Facilitate Retail Investors' Direct Investments in Growth Firms

It is not enough to provide an alternative to financial intermediation (section 6.3.9) and venture capital (section 6.3.10). One of the strategic design principles should be to facilitate, with minimal use of financial intermediaries, retail investors' direct investments in shares issued by small and medium-sized companies in the early expansion phase.

The current funding models, business models, and earnings logic of small and medium-sized growth firms tend to exclude retail investors. This can be illustrated with three comments. Financial Times, a newspaper, described the situation in 2018 as follows: "[P]rivate funding is available in record abundance, from sovereign wealth funds, private equity, venture capital, banks and other companies … [I]f start-ups go through their hyper-growth phase while still in private hands, or without going public at all, stock market investors do not share in that value creation … While retail investors may be able to gain indirect access via pension or mutual funds … they cannot generally participate in private funding rounds. Stock markets have long given even the smallest investors the chance to buy shares in the next Amazon or Netflix. If wealthy owners, financiers and other big businesses are funding start-ups that stay private in a kind of closed loop, the spirit of participatory 'democracy' that US stock market capitalism has nurtured could be lost."[230] Ben Horowitz, co-founder of Andreessen Horowitz, summed up retail investors' situation in a 2019 Financial Times interview: "The public market investor doesn't get access to a lot of the growth, and that just creates wealth inequality … [Regulators] basically gave all that growth opportunity to people who are already wealthy."[231] Jay Clayton, chairman of the SEC, suggested in 2019 that it should be made easier for less-than-wealthy individuals to invest in private companies.[232] The SEC is focusing on new exemptions for this purpose.[233]

It is more difficult for retail investors to invest in growth firms directly if listings and the numbers of companies with publicly-traded shares remain low. IPOs largely have been replaced by trade sales.

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230 The FT View. At a record high, the US market is still shrinking. Financial Times, 24 August 2018.

231 Richard Waters, Andreessen Horowitz rides the wave of Silicon Valley IPOs. Venture capital firm's co-founders feel vindicated after gatecrashing investment world. Financial Times, 2 April 2019.

232 Clayton J (2019).

233 SEC Release Nos. 33 – 10649, 34 – 86129 (June 18, 2019) (Concept Release on Harmonization of Securities Offering Exemptions).

There is a trend of small and medium-sized growth firms being taken over by large firms in a trade sale for three reasons. First, since the valuation of the company can be increased by complementarities in a trade sale, it is often the preferred choice of profit-maximising shareholders. Second, growth firms have increasingly turned to venture capital for cash. Venture capitalists require an exit. They tend to prefer a trade sale in order to maximise profits. Third, there is a globalisation and concentration trend in economy. Small and medium-sized firms may benefit from a trade sale in more concentrated and globalised markets.

If the existing shareholders of growth companies prefer trade sales, retail investors get no chance to make direct equity investments in those companies. In fact, venture capital and trade sales are rendering stock exchanges increasingly obsolete for many firms.[234] In the long term, retail investors may end up poorer unless they get a chance to provide an alternative to venture capital.

If company and securities law are to facilitate direct investments by retail investors, they must balance conflicting interests in a new way. On one hand, company and securities law should protect retail investors. On the other, company and securities law will not be able to increase the number of relatively small companies with publicly-traded shares unless these laws protect the firm and its controlling shareholders.

While increasing retail investors' direct equity investments is an important goal in its own right, it could as a bonus help to support large long-term infrastructure projects. Short-term investors tend to be unwilling to provide funding for such projects. For example, there is a "a large infrastructure investment gap in the EU economy". Long-term retail investors saving for retirement might appreciate the stable returns of large infrastructure investments.[235] This said, direct equity investments in complex infrastructure projects may be more suitable for professional investors.

6.3.12 Use Regulatory Dualism

We propose regulatory dualism as a strategic design principle. As discussed earlier, one of the policy principles proposed in this book is to increase competition (section 6.2.3). Competition can be increased by increasing diversity (sec-

234 See also Sobel R (1977) pp 220 – 221: "If and when the two gigantic forces do come together – when entire underwritings are taken by trustees – the stock exchanges will become obsolete."
235 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 3.2.

tion 6.3.8) and by ensuring that there is an alternative to financial intermediation (section 6.3.9) and venture capital (section 6.3.10). To provide an alternative, you need market segmentation in some form.[236]

Market segmentation should be reflected in the regulatory regime. The one-size-fits-all principle with the same heavy regulatory regime for all market participants would increase entry barriers, benefit the largest market participants, and increase concentration.[237] It would also hamper technological innovation in financial services and markets.[238]

Some form of market segmentation already seems to belong to usual practices in the regulation of stock exchanges (with different categories of trading venues) and securities markets (with different categories of issuers and investors).[239]

Market segmentation can also be the result of what is known as regulatory dualism. Regulatory dualism is a way to address the so-called Olson problem,[240] that is, the tendency of established economic and political elites to resist reforms. Regulatory dualism "seeks to avoid, or at least mitigate, the Olson problem by permitting the existing business elite to be governed by the prereform re-

236 See, for example, European IPO Task Force (2015) pp 52–53, Aim 1.1: "Encourage a diverse and attractive funding base in European public markets for companies of all sizes". Recommendation 1.1.1: "Provide companies with access to different regulatory, administrative & fiscal environments appropriate to their financing needs at different stages of growth". Aim 1.2: "Promote the concept of 'Think Small First' in EU financial regulation affecting Emerging Growth Companies". Recommendation 1.2.1: "Support alternative exchange markets (SME Growth Markets) with more flexible and calibrated financial regulation affecting Emerging Growth Companies".

237 See nevertheless FESE (2015) pp 4–5: "Future proposals to enhance the CMU must place emphasis on the positive effects of fair competition and follow the principle of a level playing field where no two competitors should be allowed to do the same business while being subject to different rules." SEC (2000) Part II, I.C: "In short, Regulation ATS recognized the evolving role that alternative trading systems play in our securities markets. It gave these systems the choice of registering with the Commission either as an exchange or as a broker-dealer … Regulation ATS provided alternative trading systems with a regulatory structure which incorporated them into the national market system, while preserving their flexibility."

238 The 2017 Joint Economic Report (115th Congress), Chapter 6, pp 122–137, at p 133: "As emerging technologies play a larger role in financial services and markets, care must be taken to protect beneficial innovation from burdensome regulation that will repress new technologies in favor of old … There is much need for more bipartisan initiatives to ease regulatory burdens, increase regulatory certainty, and encourage entrepreneurs and startups." Lindsey B, Teles SM (2017) p 21: "[I]ncreasing concentration can be more than a cause of bad rents; it can also be a consequence of them. The creation of entry barriers makes it tougher for new entrants, thus reducing the number of firms contesting a given market."

239 Storm P (2010) p 149.

240 Olson M (1982).

gime, while pursuing development by allowing other businesses to be governed by a reformed regime".[241]

For example, regulatory dualism has been used for the purpose of fostering equity crowdfunding (Chapter 7), SME markets (section 5.4),[242] and fintech. Fintech in particular benefits from a "regulatory sandbox" in some countries.[243] While banking services are governed by a very complex regulatory framework, a "regulatory sandbox" makes it possible for startups to develop their products safely and with a fairly clear path to regulatory approval. A regulatory sandbox is "a framework set up by a financial sector regulator to allow small scale, live testing of innovations by private firms in a controlled environment (operating under a special exemption, allowance, or other limited, time-bound exception) under the regulator's supervision".[244]

It could be easier to implement regulatory dualism than carry out fundamental reforms of the current regime. Regulatory dualism could even look appealing to incumbents as it can reduce political pressures to change the current regime (or prereform regime). It can look appealing to reformers, consumers, and new entrants by facilitating choice (that is, an exit from the prereform regime).[245]

In this book, regulatory dualism is proposed as a way to increase competition between the financial intermediation industry and alternatives to financial intermediation. Regulatory dualism is proposed to be used in the following ways (section 6.4):

- to support SME markets with more flexible and calibrated financial regulation;[246]
- to limit the scope of securities law;

241 Gilson RJ, Hansmann H, Pargendler M (2011) p 478. For applications, see, for example, Venezze FC (2014).

242 See, for example, Gilson RJ, Hansmann H, Pargendler M (2011) p 504 on Neuer Markt.

243 Jenik I, Lauer K (2017) p 1; Mangano R (2018) p 728; European Commission (2018) p 112. The first sandbox-like framework was set up by CFPB in 2012 under the name Project Catalyst. In the UK, the FCA coined the term "regulatory sandbox" in 2015. FCA (2015a). See also The Economist, Trouble logging in, 30 May 2019.

244 Jenik I, Lauer K (2017) p 1.

245 See Hirschman AO (1970) on voice and exit; Gilson RJ, Hansmann H, Pargendler M (2011) pp 479–480 on regulatory dualism as "an attractive compromise from the elites' standpoint".

246 European IPO Task Force (2015) pp 52–53, Aim 1.1: "Encourage a diverse and attractive funding base in European public markets for companies of all sizes". Recommendation 1.1.1: "Provide companies with access to different regulatory, administrative & fiscal environments appropriate to their financing needs at different stages of growth". Aim 1.2: "Promote the concept of 'Think Small First' in EU financial regulation affecting Emerging Growth Companies". Recommendation 1.2.1: "Support alternative exchange markets (SME Growth Markets) with more flexible and calibrated financial regulation affecting Emerging Growth Companies".

- to enable retail investors' direct cross-border equity investments;
- to facilitate the development of microexchanges as a new type of marketplace;
- to facilitate the development of the small public limited-liability company as a new company form; and
- to facilitate the pooling of retail investors' private placements.

6.3.13 Use Angel Funding and Venture Capital Practices as a Model for Regulation

Our proposals include using market practices as a model for regulation when protecting retail investors.

Why should retail investors be protected? The objective of this book is to make it possible for retail investors to make direct equity investments in growth firms. Retail investors cannot negotiate terms with the issuer. To make direct equity investments happen, you need mandatory provisions of law to balance interests.

The use of market practices as a model for regulation should be regarded as fairly uncontroversial. The codification of business-to-business practices has been a fundamental theme in the long-term evolution of commercial law.[247]

There are corporate practices in the area of company law (section 2.5) and characteristic practices in angel funding and venture capital (section 5.3). Founders, firms, and investors tend to use legal tools in particular ways in funding, exit, and going public transactions.

Individually negotiated terms and practices that are the result of free bargaining and perceived as a fair way to balance the interests of equal parties could be used as a model for regulation even generally.

In practice, however, founders and venture capitalists are not really "equal". Business angels and venture capitalists will only provide funding on their own terms. Bargaining is not really free for those seeking funding. Moreover, the choice of whether, in what contexts, and to what extent market practices should be used as a model for regulation is not value free.

Having said this, these practices can at least be taken into account and used as a source of inspiration when protecting retail investors that are unable to negotiate the terms of their investments. It is proposed that corporate and exchange practices should be used as a model when improving the existing regulatory re-

247 See, for example, Goode RM (1998) p 38.

gime or designing a new company form (section 6.4.14 and Chapter 9) and a new marketplace (section 6.4.13 and Chapter 8).

For example, market practices indicate that retail investors who should save for retirement and other long-term purposes cannot be expected to become seed capital investors. Retail investors lack the necessary proximity to start-ups, specialist knowledge, diversification opportunities, and other characteristics of successful seed capital investors.[248] Retail investors could nevertheless complement early investors in later funding rounds provided that retail investors' direct investments are supported by an adequate regulatory framework.

Moreover, the regulation of retail investment should reflect the ancillary services of retail investors. Unlike angel investors and venture capital investors, retail investors can provide very limited ancillary services to the firm. Retail investors are free-riders. In the late nineteenth century, it was understood that shareholders are poor monitors in their capacity as shareholders (section 2.4.5). This should be reflected in the regulation of the monitoring function and the function of retail investors. The governance model should foster the long-term interests of the firm without the active participation of retail investors. In practice, this could mean reliance on controlling shareholders and the use of a two-tier board. The governance model should be laid down by mandatory provisions of law.

6.3.14 Use Best Practices from SME Market Design as a Model for Regulation

There are successful and less successful SME exchanges. To increase the number of growth firms with publicly-traded shares, it is useful to study past experiences from SME markets. Using the best practices of SME market design as a model for regulation could be used as a strategic design principle when regulating SME markets (section 5.4).

Stock exchanges provide core services and ancillary services. From the perspective of the firm, the core services include facilitating trading in the company's securities, providing access to market funding, and facilitating the provision of shareholders' services to the firm.[249] For example, stock exchanges provide an exit channel for shareholders and can influence the share ownership structure of the company.[250] Exchanges can provide many ancillary services connected to

248 See, for example, OECD (2015c) p 119, Table 7.3.

249 See also FESE (2019) p 9 on the function of stock exchanges.

250 For the function of SME exchanges, see OECD (2015c) p 129. For stock exchanges as an exit channel for early investors, see Holmström B (2015) p 7; Clayton J (2019).

these core services.[251] The ancillary services may have changed as exchange operators have adapted their business models to reflect technological and regulatory change.[252]

There are things to be learnt from the practices of SME exchanges. For example, if there is a new exchange or segment for small companies, it should be an exchange or segment for SMEs rather than start-ups. A market for lemons should be prevented by the use of mentoring and by admission requirements. Liquidity can be improved by market-making. There can be innovative ways to reduce costs and increase investment research. Moreover, to increase the viability of the business project and to reduce the risk exposure of new investors, lock-ins can be used to ensure that the founders and key shareholders are committed to the project for a certain number of years.

6.3.15 Ensure Sufficient Liquidity

Ensuring liquidity has been perceived as an important regulatory goal (Chapter 3 and section 5.4.4). In economics, there is a positive correlation between stock market liquidity and the contemporaneous and future rates of economic growth.[253] Ensuring sufficient liquidity (section 8.7) should be a strategic design principle for the regulation of public stock markets.

There is a fundamental difference between the liquidity of large cap stocks and small cap stocks. Large cap stocks have high trading volumes and are relatively liquid. Reducing transaction costs in such markets tends to benefit computer-based short-term trading.[254] Small cap stocks are inherently illiquid, because they have asymmetrical order-book markets: "[A]t any point in time, there is generally not a large seller of the stock available to offset a large buyer of the stock or vice versa."[255]

What is liquidity in securities markets? Liquidity may be a question of perspective, preferences, and culture. This can be illustrated with the following examples. First, liquidity may not mean the same thing to all investors (such as high-frequency traders, short-term investors, and long-term investors). Second, where investors prefer very high liquidity in the short term, long-term invest-

251 See, for example, FESE (2019) pp 9–10; OECD (2015c) p 128.

252 Macey JR, O'Hara M (2005) pp 568–569: "Exchanges must compete with a wide range of competitors, forcing exchanges to adapt both their economic form and function."

253 Levine R, Zervos S (1998). See Gilson RJ, Hansmann H, Pargendler M (2011) p 477.

254 Weild D, Kim E, Newport L (2013) p 11.

255 *Ibid.*, pp 12 and 20.

ments (such as long-term infrastructure investments) may be hampered. Retail investors that require a high level of short-term liquidity may choose deposits in home country banks,[256] invest their savings in the shares of the largest listed firms with the highest trading volumes, or choose large exchange-traded funds (ETFs). Third, to increase retail investors' direct long-term equity investments, it would be necessary not only to ensure sufficient liquidity but even to foster a liquidity culture designed to support retail investors' direct long-term share ownership.[257]

The fact that ensuring liquidity has been used as an important regulatory goal thus raises the question what "liquidity" means. Liquidity seems to mean different things depending on the point of view.

The overall liquidity of stocks is rather low in the light of the fact that almost all companies in the world are private and their shares lack secondary markets. The present regulation of stock exchanges and securities markets has failed to bring enough companies to public markets. To increase the liquidity of shares, the most important thing to do would be to bring more companies to public markets rather than tinker with the liquidity of already quite liquid large cap stocks.[258]

In finance, liquidity has been measured on the basis of volumes (absolute volumes of liquidity taking and liquidity providing, value of trading relative to the size of the market, or value of trading relative to the size of the economy)[259] or effect on valuation (illiquidity premiums, spreads).[260]

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256 Kudrna Z (2016) p 6: "While the overall EU savings rate is higher than that in the United States (20 and 17 percent of GDP, respectively), most of it is deposited in banks located in the home country of the given saver. Hence, the CMU also needs to attract more household and corporate-sector savings in vehicles that will invest in capital markets and encourage them to diversify across the entire EU."

257 Oliver Wyman (2012) section 3, p 9 on liquidity preferences making it more difficult to raise funding for long-term assets.

258 See also FESE (2015) pp 4–5: "We believe that policies undertaken in the past have helped increase the efficiency of trading, in particular in the largest companies, and as such have been effective." The Economist, March of the machines, 5 October 2019: "[T]he stockmarket is now extremely efficient."

259 See Huh Y (2014) on liquidity taking and liquidity providing; King RG, Levine R (1993) p 538 on how stock market liquidity is "measured both by the value of stock trading relative to the size of the market and by the value of trading relative to the size of the economy".

260 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 2: "… some market participants have raised concerns about the limited liquidity in secondary markets, which makes it difficult to trade in and out of these instruments. Limited liquidity could translate into higher illiquidity premiums …"

In commercial law, the discipline of this book, we can take a more holistic perspective.[261] If liquidity in stock markets means the existence of circumstances in which a shareholder can sell shares without affecting market price, liquidity depends on marketplace-related things and things related to shares or shareholders. To ensure sufficient liquidity, it is necessary to regulate all aspects.

Liquidity depends on the organisation of trading (fragmentation[262] or centralisation of trading, low or high access criteria, the trading mechanism[263]), transparency (issuer disclosures, the level of trade transparency),[264] and market integrity.[265] There can be a trade-off between liquidity and trade transparency. For example, the practices of high-frequency trading show how transparency can be one-sided and reduce liquidity for the side that cannot benefit from transparency.[266] High-frequency trading and increased use of dark pools may have reduced liquidity (section 3.4.2).

Moreover, liquidity depends on the type of traded instruments (such as bonds or shares),[267] market capitalisation (large cap or small cap), tick sizes[268] or the size of a trading lot (absolute size, size relative to market capitalisation), share ownership structure (concentrated or dispersed, shares in free float),[269] foreclosure of the market (caused for example by the use of structural takeover defences[270] or derivatives), and share price (high price or penny shares). Liquidity seems to depend on many things.

Restrictions in exchange practice. In modern stock exchange practice, liquidity is restricted in three fundamental ways. First, the number of companies with

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261 Mäntysaari P (2017) section 7.5.

262 For example, Article 51(5) of Directive 2014/65/EU (MiFID II) contributes to fragmentation: “A transferable security that has been admitted to trading on a regulated market can subsequently be admitted to trading on other regulated markets ...” Moloney N (2014) V.1.2.3, p 431 on trade transparency regulation as a way to address fragmentation risk which arises where trading in an instrument splits across multiple venues.

263 Moloney N (2014) V.1.2.3, p 431 on how different trading functionalities can influence prejudice.

264 *Ibid.*, V.1.2.3, pp 430 – 431 on transparency rules as the mainstay of venue regulation.

265 For example, Article 51(1) of Directive 2014/65/EU (MiFID II) on rules regarding the admission of financial instruments to trading.

266 Petrescu M, Wedow M (2017) p 10; Moloney N (2014) V.1.2.3, p 431.

267 Holmström B (2015); Moloney N (2014) V.1.2.3, pp 431– 432.

268 See Weild D, Kim E, Newport L (2013); Article 49 of Directive 2014/65/EU (MiFID II).

269 See also Article 51(1) of Directive 2014/65/EU (MiFID II) on rules regarding the admission of financial instruments to trading. ESMA shall develop draft regulatory technical standards. Commission has power to adopt them. Article 51(6) of Directive 2014/65/EU (MiFID II).

270 Article 10 of Directive 2004/25/EC (Directive on takeover bids); Mäntysaari P (2010c) Chapter 18.

publicly-traded shares is low because of the current legal framework. Second, digitalisation has increased the number of marketplaces and contributed to the fragmentation of trading (section 3.2.6). Third, there are various kinds of alternative venues such as dark pools (section 3.3).

The fragmentation of trading, the rise of dark pools, and the diversification of stock exchanges into new businesses indicate that the operators of marketplaces do not regard maximising liquidity as their most important goal.[271] Stock exchanges are businesses that have their own goals. The current legal framework reduces transaction costs and increases liquidity especially in large cap stocks for the benefit of high-volume and high-frequency traders. Ensuring a high level of transparency and liquidity seems to have been used as rhetoric to foster the business of market participants that are in the best position to benefit from greater information flows and lower spreads, and the business of high-frequency traders that is based on one-sided transparency (section 3.4.2).

Restrictions in corporate practice. Shares are not liquid unless they are transferable. The free transferability of shares is regarded as one of the characteristics of the limited-liability company. In corporate practice, however, it is customary for firms and investors to restrict the transferability of shares.

The transferability of shares is sometimes reduced by the terms of the share issuing in order to increase the liquidity of other shareholders′ shares. This can be achieved by lock-up clauses. The perceived risk exposure of retail investors can be reduced if the controlling shareholders or key institutional investors promise not to sell their shares during the lock-up period. If retail investors' perceived risk is lower, they may be willing to pay more for the issued shares, which reduces both the funding costs of the firm and the dilution of existing shareholders' holdings.

In venture capital and project finance transactions, it is customary to ensure that the key participants are committed for the whole duration of the project. Restrictions on the transferability of shares are used to ensure the commercial viability of the project.

There are even other reasons to restrict the transferability of shares in corporate practice. For example, it is customary for rational firms to restrict the transferability of shares in order to manage the company's share ownership structure, funding structure, and takeover defences.[272] Since shareholders can be good or bad agents from the perspective of the firm, the quality and cost of shareholders' services depend on the share ownership structure. As a principal, it is important

271 See, for example, Fioravanti SF, Gentile M (2011) p 14.
272 See Mäntysaari P (2010a) sections 9.2.6, 9.4.2 and 9.5.5.

for the firm to choose good agents. Moreover, in regulated sectors, rational firms may in some cases restrict the transferability of shares for reasons of regulatory compliance.[273]

Sufficient liquidity. Rather than maximise transferability and liquidity, company law and securities law should ensure flexibility so that issuers can manage liquidity levels. One of the stategic design principles should be ensuring sufficient liquidity (section 8.7).

In the light of the fact that current regulation has reduced the liquidity of small cap stocks to benefit the interests of high-volume traders and institutional investors, there is reason for regulators to increase the discretion of growth firms to manage liquidity according to their own long-term interests.

Market structure. The liquidity of small cap stocks and the shares of growth firms depends on market structure.[274]

In the past, liquidity was used as an argument in favour of exchange mergers. However, after a period of concentration, there are more marketplaces and more diverse marketplaces thanks to digitisalisation, the reduced costs for technology, and market regulation (section 3.2). This goes hand in hand with the fact that trading has become a commodity.[275] Many other functions that used to belong to exchanges are now organised in other ways. Monitoring and enforcement functions have increasingly been moved from exchange operators to financial superivision authorities and other government bodies. Self-regulation is in the process of being replaced by a growing body of government regulation. Moreover, information perceived as useful and relevant has moved to websites, digital platforms, and the social media.

The current market structure has failed to provide sufficient liquidity for SME and small cap shares. A new market structure would be essential to increase liquidity. In this book, we propose microexchanges as a new kind of marketplace (section 6.4.13 and Chapter 8).

273 See, for example, Article 10 of Directive 2014/65/EU (MiFID II); SEC Release No. 34 – 85828 (May 10, 2019), III.B.1: "... LTSE will be wholly owned by LTSEG. The proposed Amended and Restated Certificate of Incorporation of LTSEG ... includes restrictions on the ability to own and vote shares of capital stock of LTSEG. These limitations are designed to prevent any LTSEG shareholder from exercising undue control over the operation of the Exchange and to ensure that the Exchange and the Commission are able to carry out their regulatory obligations under the Act."
274 Weild D, Kim E, Newport L (2013) p 14: "Market structures that are optimized for large capitalization stock trading do not work to support SME markets."
275 Macey JR, O'Hara M (2005) pp 568 – 569.

Matching and market making. Factors that influence liquidity include the model for the matching of bids and the availability of market making, among other things.

Continuous matching of bids is the method of choice for large cap stocks. Large cap stocks generally do not need active market making. Continuous matching of bids does not work as well for small cap stocks. Small cap stocks are inherently illiquid and the shares of private companies obviously even more so.[276]

An alternative for small cap stocks is the matching of bids through auctions (section 8.7).[277] Moreover, a market for small cap stocks that are inhirentely illiquid needs to be supported by active market making.[278]

In a 2015 OECD study, the availability and existence of alternatives was illustrated with the trading model of NYSE Alternext (now Euronext Growth):[279]

"NYSE Alternext market model combines trading both on and off the Central Order Book to consider the liquidity profiles of SMEs and maximize order execution possibilities for investors.

The first method of trading is based on Liquidity Providers (LPs) ... LPs act on behalf of the listed company and protect against changes in volatility, guarantee trades at all times at the best price, and increase the volume of trades in the Central Order Book.

The most liquid NYSE Alternext equities ... are traded [in] the Central Order Book, i.e. they are traded continuously between 09:00 CET and 17:40 CET. There are also pre-opening (07:15 – 09:00 CET) and pre-closing (17:30 – 17:35 CET) phases, at which times orders can be entered, modified or cancelled in the Central Order Book, where they accumulate without being traded. There is also a Trading at Last (TAL) quoted price phase between 17:35 – 17:40 CET.

All other equities are traded through a daily auction held at 15:30 CET. From 07:15 – 15:30 CET, orders accumulate in the order book but are not executable. Once the order accumulation period ends, buy and sell orders are centrally matched through an auction procedure to establish an auction price. This takes place at 15:30 CET. The auction price of a share is based on its reference price and is used as a basis for the following day's auction. The auction is fol-

276 OECD (2015c) p 130.
277 Mahoney PG, Rauterberg GV (2018) p 270 on how to address issues that arise from differences in the speed with which various market participants receive data: "One of the best developed ideas for major market structure reform is Budish, Cramton, and Shim's proposal to replace the current structure of continuous trading on exchanges with frequent batched auctions." Budish E, Cramton P, Shim J (2015).
278 Weild D, Kim E, Newport L (2013) p 12; OECD (2015c) p 130.
279 OECD (2015c) p 131, Box 7.5.

lowed by a 30 minutes Trading-at-Last phase (TAL), between 15:30 and 16:00 CET which allows trading at the auction's price only. Thereafter, orders are accumulated until the following day's auction."

6.3.16 Complement Retail Investors' Direct Investment Regime with Access to Low-Cost Funds

Retail investors' direct investment regime should be complemented by access to low-cost investment funds. The strategic design principle of ensuring access to low-cost funds can help retail investors to diversify their investments.[280]

While access to low-cost financial advice engines might help retail investors take more rational investment decisions and choose between a larger number of investment alternatives, certain fundamental problems would still remain. In particular, retail investors are amateurs that need a diversified portfolio.

Merton and Bodie summed up the problem as follows: "[T]he creation of all these alternatives combined with the deregulation that made them possible has consequences: deep and wide-ranging disaggregation has left households with the responsibility for making important and technically complex micro-financial decisions involving risk—such as detailed asset allocation and estimates of the optimal level of life-cycle saving for retirement—decisions that they had not had to make in the past, are not trained to make in the present, and are unlikely to execute efficiently in the future, even with attempts at education." Merton and Bodie believed that "the future trend will shift toward more integrated financial products and services, which are easier to understand, more tailored toward individual profiles, and permit much more effective risk selection and control."[281]

Retail investors need a low-cost vehicle to diversify their investments. Retail investors "have simply acted rationally in choosing to turn their portfolios over to professionals, typically by employing intermediary vehicles such as mutual funds".[282]

When funds accept retail investors, funds' regulatory compliance costs are increased. This is because there are two principal modes of securities regulation, namely "antifraud only" for markets that exclude retail investors and "retail protective" for markets that include retail investors.[283] In the EU the default rule is

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280 Merton RC, Bodie Z (2005) p 7 on the benefits of mutual funds for individuals.
281 *Ibid.*, pp 8–9.
282 Cartwright BG (2007).
283 *Ibid.*

that the "retail protective" regime to some extent can cover transactions with other counterparties as well.[284] In any case, mutual funds that accept retail investors are subject to intensive regulation that limits investment strategies, limits freedom of contract, and increases the costs of regulatory compliance. Funds that exclude retail investors – such as hedge funds, venture capital funds, or private equity funds – are not subject to the "retail protective" regulatory regime or at least not to the same extent. For this reason, they generally have more discretion and their regulatory compliance costs can be lower.

There is not much regulators can do about the difference in the regulation of funds that accept retail investors and funds that only accept institutional investors: "Quite obviously, this does *not* mean that we should dismantle or cut back on the retail-protective regimes … Nor would it make sense to foist the costs and burdens of retail-protective regimes on institutional investors who neither want nor need them."[285]

Costs should be reduced through financial innovation instead. Index funds are the most important financial innovation in this area. In an article published in 1974, Paul Samuelson argued that stockpickers charged large fees for achieving worse returns than the market average and that low-cost, low-turnover funds that tracked the S&P 500 should be set up as an alternative.[286]

An index fund is a mutual fund that holds all the stocks in the index in proportion to their market capitalisation. In 1975, the first index fund was launched by the mutual-fund group Vanguard founded by Jack Bogle. Index funds are now worth around a sixth of the value of the US stockmarket.[287]

There is still room for more low-cost funds. Passive funds charge 0.03 –0.09 % of assets under management each year.[288] Although the share of passive asset management is growing, margins are still high. There is anecdotal evidence of margins being cut: "BCG calculates that the average asset manager's profit

284 Article 24 and 30 of Directive 2014/65/EU (MiFID II); Directive 2011/61/EU (AIFMD).

285 Cartwright BG (2007).

286 Samuelson PA (1974); Samuelson PA (1994). See also Bessembinder H (2018) p 441 on the US market: "[T]he approximately 25,300 companies that issued stocks appearing in the CRSP common stock database since 1926 are collectively responsible for lifetime shareholder wealth creation of nearly $35 trillion, measured as of December 2016 … The 1092 top-performing companies, slightly more than 4 % of the total, account for all of the net wealth creation."

287 The Economist, Beating the pros, 24 January 2019; The Economist, Remembering John Bogle, patron saint of the amateur investor, 21 January 2019; The Economist, Buttonwood. The index fear, 5 July 2018; The Economist, Buttonwood. Criticism of index-tracking funds is ill-directed, 14 November 2017.

288 The Economist, March of the machines, 5 October 2019.

margin has been cut from 41 per cent a decade ago, to 38 per cent [in 2018] … BCG expects margins to fall to 36 per cent by 2021."[289]

As index funds are relatively simple, it should be easier for government regulators to monitor them. This should reduce the risk of fraudulent schemes such as Ponzi schemes.[290]

Depending on the country, citizens may indirectly benefit from sovereign funds. Norway, China, and Abu Dhabi are examples of countries that have very large sovereign funds. Due to their sheer size, these funds have to invest globally in various kinds of asset classes. In contrast, the French public investment bank and sovereign fund Bpifrance invests in French tech start ups through direct investment and a fund-of-fund activity.[291]

Citizen capitalism could even be supported by establishing a national "Universal Fund" as proposed by Stout, Gramitto and Belinfanti in the US.[292] A Universal Fund would be funded by donations from corporations and wealthy individuals. The Fund would grow over time into perpetuity. According to the proposal, the Fund would be open to Americans ages 18 and older at no cost. Each participating citizen would receive a single share, supplemental income from returns generated by the Fund, and shareholder voting rights. Shareholder dividends would grow as the Fund grows.

In any case, access to low-cost funds would benefit retail investors as a way to make diversified investments based on their own rational decisions.

6.3.17 Complement Retail Investors' Direct Investment Regime with a Mandatory Occupational Pension System and Social Security

Investors can take good or bad investments decisions. Circumstances can change. Investments can fail. There should be a back-up regime for a direct investment regime.

The absence of a back-up regime would increase the plight of low-income citizens[293] and make middle-income retail investors more risk averse. More

289 Owen Walker, Amundi: a world where scale counts, Financial Times, 29 July 2018.
290 Randy Neugebauer, Allen Stanford's Ponzi scheme victims have been shortchanged, Financial Times, 12 February 2019.
291 Harriet Agnew, France announces €5bn push for tech start-ups, Financial Times, 17 September 2019.
292 Stout L, Gramitto S, Belinfanti T (2019).
293 Patti Waldmeir, The boomers going bust: why elderly bankruptcy is rising in America. Financial Times, 8 August 2019.

risk-averse retail investors might keep a larger share of their savings in cash or illiquid assets such as real estate and invest a larger share of their savings indirectly rather than directly. In other words, the absence of such a system might make low or middle-income citizens worse off and increase financial inequalities.[294]

Generally, the existence of back-up regimes is not controversial in market economy. It is customary to complement market-based competition regimes with back-up regimes that deal with the societal problems caused by competition.[295] Moreover, there are general social protection systems. They can be the source of a large share of the income and wealth of the less well-off.[296] There are also mandatory pension systems. A 1994 World Bank study suggested that "financial security for the old and economic growth would be better served if governments develop three systems, or 'pillars,' of old age security; a publicly managed system with mandatory participation and the limited goal of reducing poverty among the old; a privately managed, mandatory savings system; and voluntary savings".[297]

A system that makes retail investors responsible for their own investment decisions should be complemented by a comprehensive statutory regime as a back-up system. How this can be achieved is outside the scope of this book. There can be cash benefits or in-kind supports in the form of public services such as health, education, and care. The entitlements and contributions can be tied to people's employment status or not tied to it. Statutory minimum protection can take the form of compulsory insurance savings, a state pension system, or a comprehensive social security system.[298] Public systems can ensure greater economies of scale.[299] In some countries, wealth is controlled by sovereign wealth funds.

In the EU, there is a distinction between social security schemes, compulsory employment-related pension schemes which are considered to be social security schemes, and non-compulsory occupational retirement provision business.[300]

294 Group of Thirty (2019) pp 56–58.

295 See, for example, Executive Office of the President of the United States (2016) pp 3–4: "Strategy #3: Aid workers in the transition and empower workers to ensure broadly shared growth."

296 See Catherine S, Miller M, Sarin N (2020).

297 World Bank (1994) p xiv.

298 Oliver Wyman (2012) pp 7 and 25.

299 Group of Thirty (2019) p 59.

300 Article 3 of Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs).

Tying social-protection entitlements and contributions to people's employment status is becoming harder because of the increasingly blurred lines between traditional employment and different forms of independent work. Moreover, such a system can leave people outside protection when they become unemployed and would need protection.[301] A basic income system is regarded as too expensive.[302]

Taxation plays an important role in occupational pension systems. In the EU, most Member States tax occupational pensions according to the "EET system" or the "ETT principle". Under the EET system, contributions are exempt, the investment income and capital gains of the pension institution are exempt, but benefits are taxed. According to the ETT principle, contributions are exempt, but the investment income and capital gains of the pension institution are taxed, and the benefits are taxed. In other words, the contributions by both employer and employee are tax deductible in both cases. The benefits are taxed. The investment results of the pension fund are usually exempt in the Member States of the EU but taxed in Denmark, Italy and Sweden.

Tax benefits in the form of tax deductibility and deferred taxation not only give an incentive to make contributions to pension funds but make it possible for low-income people to make the contibutions.

Financial intermediaries will be necessary to operate much of the financial back-up regime. According to Peter Drucker, the ideal alternative for employee retirement systems is pension co-operatives.[303] For example, Drucker was a participant of TIAA-CREF himself. There are also financial intermediaries that are linked to the state. For example, the Canada Pension Plan (cpp) is a very large state-run earnings-related pensions scheme. Its investment board is run as an independent entity.[304] In Sweden, the buffer capital of the national pension system is managed by now seven national pension funds ranging from the First AP-fonden to the Seventh AP-fonden. This system was established in connection with the national supplementary pension reform in 1959. The original number of national pension funds was three.[305]

301 For healthcare, see Leslie Hook, Hannah Kuchler, How coronavirus broke America's healthcare system. Financial Times, 30 April 2020.

302 OECD (2017).

303 Drucker PF (1976). For employee pension funds, see also Boerner H (2004); Roth M (2013).

304 The Economist, Moose in the market, 17 January 2019.

305 SOU 2012:53. AP-fonderna i pensionssystemet – effektivare förvaltning av pensionsreserven Betänkande av Buffertkapitalsutredningen. Stockholm 2012.

6.4 Operational Design Principles

6.4.1 General Remarks

The strategic design principles (section 6.3) can be implemented at a more concrete level by using operational design principles. The operational design principles should describe how to do what according to the strategic design principles should be done. An operational design principle can address one or more strategic design principles.

In the previous section, strategic design principles were often illustrated with the help of regulatory or corporate practices at the operational level.

In the following, we will propose in a more organised way some operational design principles to reach the particular goals of this book. They include the following actions: simplify the process of listings and the issuing of shares to the public (section 6.4.2); simplify periodical reporting and ongoing disclosure obligations (section 6.4.3); simplify prospectus and disclosure rules for SMEs (6.4.4); limit the national scope of securities law (section 6.4.5); limit the international scope of securities law and use mutual recognition (section 6.4.6); facilitate retail investors' cross-border direct investments (section 6.4.7); increase cross-listings (section 6.4.8); facilitate the use of depositary receipts (section 6.4.9); make it easier for retail investors to take reasonable investment decisions (section 6.4.10); focus on the incentives of controlling shareholders and retail investors (section 6.4.11); develop SME exchanges (section 6.4.12); create microexchanges (section 6.4.13); create the small public limited-liability company as a new company form to complement the microexchange (section 6.4.14); facilitate the pooling of retail investors' private placements (section 6.4.15); and use financial technology (section 6.4.16).

6.4.2 Simplify the Process of Listings and the Issuing of Shares to the Public

The first operational design principle is to simplify the process of listings and the issuing of shares to the public. Too high admission costs can be reduced with the help of direct listings, reverse takeovers, and SPACs. Direct listings can be easier when they are preceded by private placements or followed by direct primary offerings. The issuing of shares to the public can be simplified by simplifying registration obligations and the duty to publish a prospectus.

Filing information in advanced and shelf-registrations in the US. It should be made possible for the company to file information with the financial supervision authority in advance for future use and use the regulatory filings many times.

In the US, traditional registered offerings have partly been displaced by shelf registered offerings and Rule 144A private offerings.[306] The SEC's earlier shelf registration policy was codified by Rule 415.[307] Under the shelf registration procedure, an eligible issuer is permitted to file registration documents specifying that it intends to sell a certain maximum amount of a particular class of securities at one or more unspecified points within the succeeding two years.[308] The shelf registration procedure was made a permanent option. Traditional registered offerings have partly been displaced by shelf registered offerings and Rule 144A private offerings.[309] The US regulatory framework was streamlined in the 1990s.

In 1995, the SEC established the Task Force on Disclosure Simplification, comprising staff from across the SEC, to review regulations affecting capital formation with a view towards "streamlining, simplifying, and modernizing the overall regulatory scheme without compromising or diminishing important investor protections". In its report to the SEC in 1996, the Task Force recommended the Commission "eliminate or modify many rules and forms, and simplify several key aspects of securities offerings".[310] Based on the Task Force's recommendations, the SEC rescinded forty-five rules and six forms and adopted other rule changes to eliminate unnecessary requirements and to streamline the disclosure process.[311]

Also in 1995, the SEC established the Advisory Committee on the Capital Formation and Regulatory Processes to advise on, among other things, the regula-

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306 Carow KA, Erwein GR, McConnell JJ (1999) p 55 on changes in the US in 1970 – 1997.

307 SEC Release No. 33 – 6383 (Mar. 3, 1982). See Neary MC (1983) p 276; Auerbach J, Hayes SL (1986) p 125.

308 Auerbach J, Hayes SL (1986) p 124.

309 Carow KA, Erwein GR, McConnell JJ (1999) p 55 on changes in the US in 1970 – 1997: "Traditional registered offerings have been partly displaced by shelf registered offerings and Rule 144A private offerings."

310 Report of the Task Force on Disclosure Simplification (March 5, 1996); SEC Release No. 33 – 10064, 34 – 77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.C, p 16.

311 SEC Release No. 33 – 10064 (April 13, 2016), II.C, page 16. See also SEC Release No. 33 – 7300 (May 31, 1996) (Phase One Recommendations of Task Force on Disclosure Simplification); SEC Release No. 33 – 7431 (July 18, 1997) (Phase Two Recommendations of Task Force on Disclosure Simplification).

tory process and disclosure requirements for public offerings.[312] The 1995 Advisory Committee's primary recommendation was implementing a system of "company registration". The SEC described it as follows: "Under a 'company registration' system, a company would, on a one-time basis, file a registration statement (deemed effective immediately) that includes information similar to that currently provided in an initial short-form shelf registration statement. This registration statement could then be used for all types of securities and all types of offerings. All current and future Exchange Act reports would be incorporated by reference into that registration statement, and around the time of an offering, transactional and updating disclosures would be filed with the Commission and incorporated into the registration statement."[313]

Simplifying prospectus requirements in the EU. In the EU, prospectus requirements were to some extent simplified by the Prospectus Regulation.[314]

The Prospectus Regulation applies "when securities are offered to the public or admitted to trading on a regulated market situated or operating within a Member State".[315] It does not require the publication of a prospectus when securities are "admitted to trading" on an MTF, because an MTF is not a "regulated market".[316] However, the Prospectus Regulation does require the publication of a prospectus when a communication constitutes an "offer of securities to the public"[317] regardless of whether the trading venue is a regulated market or an MTF.

The Prospectus Regulation permits the use of different kinds of prospectuses: "In view of the specificities of different types of securities, issuers, offers and admissions, this Regulation sets out rules for different forms of prospectuses—a standard prospectus, a wholesale prospectus for non-equity securities, a base prospectus, a simplified prospectus for secondary issuances and an EU Growth prospectus."[318]

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312 Report of The Advisory Committee on the Capital Formation and Regulatory Processes (July 24, 1996).

313 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.C, pp 17–18. See also SEC Release No. 33–7314 (July 25, 1996) (Securities Act Concepts and Their Effects on Capital Formation).

314 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

315 Article 1(1) of Regulation 2017/1129/EU (Prospectus Regulation).

316 Point (j) of Article 2 of Regulation 2017/1129/EU (Prospectus Regulation); point (21) of Article 4(1) of Directive 2014/65/EU (MiFID II).

317 Recital 14 of Regulation 2017/1129/EU (Prospectus Regulation).

318 Recital 24 of Regulation 2017/1129 (Prospectus Regulation).

However, neither the base prospectus nor the wholesale prospectus are available for equity securities. A base prospectus would consist of a universal registration document and any amendments thereto. It is used in the Prospectus Regulation to reduce costs for frequent issuers[319] but may only be used for non-equity securities.[320]

For equity securities, the alternatives are a standard prospectus,[321] a simplified prospectus for secondary issuances (during a period of 18 months),[322] and an EU Growth prospectus for small issuers and issuings:[323] “Where a frequent issuer is eligible to draw up an EU Growth prospectus, a simplified prospectus under the simplified disclosure regime for secondary issuances … it should be allowed to use its universal registration document and any amendments thereto as a constituent part of any such prospectus, instead of the specific registration document required under those disclosure regimes.”[324]

The simplified prospectus regime for secondary issuances is for frequent issuers whose securities have already been admitted to trading on a regulated market or an SME growth market. It is not designed for new issuers or SMEs as such.[325]

The cost of compliance can be reduced when issuers can draw up their prospectus as separate documents[326] and when documents can be incorporated by reference.[327] The categories of documents that may be incorporated into a prospectus by reference were broadened in the Prospectus Regulation.

Moreover, the Prospectus Regulation provides for a universal registration document[328] akin to the US “shelf registration” or the French “Document de Référence” procedure. The use of a universal registration document is only available to issuers whose securities already are admitted to trading on a regulated market or an MTF as has been explained in the recitals of the Prospectus Regu-

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319 Recital 44 of Regulation 2017/1129 (Prospectus Regulation).
320 Recitals 24, 35 and 44 and Article 8(1) of Regulation 2017/1129 (Prospectus Regulation).
321 Article 6 of Regulation 2017/1129 (Prospectus Regulation).
322 Article 14 and recital 50 of Regulation 2017/1129 (Prospectus Regulation).
323 Article 15 of Regulation 2017/1129 (Prospectus Regulation).
324 Recital 44 of Regulation 2017/1129 (Prospectus Regulation).
325 Article 14 of Regulation 2017/1129 (Prospectus Regulation).
326 First subparagraph of Article 10(1) of Regulation 2017/1129 (Prospectus Regulation): “An issuer that has already had a registration document approved by a competent authority shall be required to draw up only the securities note and the summary, where applicable, when securities are offered to the public or admitted to trading on a regulated market. In that case, the securities note and the summary shall be subject to a separate approval.”
327 Article 19 of Regulation 2017/1129 (Prospectus Regulation).
328 Article 9 of Regulation 2017/1129 (Prospectus Regulation).

lation: "Frequent issuers should be incentivised to draw up their prospectus as separate documents, since that can reduce their cost of compliance with this Regulation and enable them to swiftly react to market windows. Thus, issuers whose securities are admitted to trading on regulated markets or MTFs should have the option, but not the obligation, to draw up and publish every financial year a universal registration document containing legal, business, financial, accounting and shareholding information and providing a description of the issuer for that financial year. On the condition that an issuer fulfils the criteria set out in this Regulation, the issuer should be deemed to be a frequent issuer as from the moment when the issuer submits the universal registration document for approval to the competent authority. Drawing up a universal registration document should enable the issuer to keep the information up-to-date and to draw up a prospectus when market conditions become favourable for an offer of securities to the public or an admission to trading on a regulated market by adding a securities note and a summary. The universal registration document should be multi-purpose insofar as its content should be the same irrespective of whether the issuer subsequently uses it for an offer of securities to the public or an admission to trading on a regulated market of equity or non-equity securities. Therefore, the disclosure standards for the universal registration document should be based on those for equity securities. The universal registration document should act as a source of reference on the issuer, supplying investors and analysts with the minimum information needed to make an informed judgement on the company's business, financial position, earnings and prospects, governance and shareholding."[329]

A universal registration document is valid for one year. No prior approval by the competent authority will be required after the first two yearly filings[330] as "[a]n issuer which has filed and received approval for a universal registration document for two consecutive years can be considered well-known to the competent authority".[331]

The universal registration document can be amended before it has become part of a prospectus: "As long as it has not become a constituent part of an approved prospectus, it should be possible for the universal registration document to be amended, either voluntarily by the issuer—for example in the event of a material change in the organisation or financial situation of the issuer—or upon request by the competent authority in the context of an ex-post filing

329 Recital 39 of Regulation 2017/1129 (Prospectus Regulation).
330 Article 9(2) of Regulation 2017/1129 (Prospectus Regulation).
331 Recital 40 of Regulation 2017/1129 (Prospectus Regulation).

review where it is concluded that the standards of completeness, comprehensibility and consistency are not met. Such amendments should be published according to the same arrangements that apply to the universal registration document."[332]

The universal registration document can speed up the process. In practice, an issuer that completes the universal registration document annually obtains a fast-track approval of the prospectus: "To speed up the process of preparing a prospectus and to facilitate access to capital markets in a cost-effective way, frequent issuers who produce a universal registration document should be granted the benefit of a faster approval process, since the main constituent part of the prospectus has either already been approved or is already available for the review by the competent authority. The time needed to obtain approval of the prospectus should therefore be shortened when the registration document takes the form of a universal registration document."[333]

Prospectus costs are increased by the existence of many jurisdictions and languages in the Member States of the EU.[334] To reduce translation costs, only the summary must be available in the official language of the host Member State (or in another language accepted by the competent authority of that Member State).[335] There is no requirement to produce a summary in the case of wholesale issuances. Summaries are required for retail issuance only. The prospectus is approved by the competent authority of the issuer's home Member State.[336] That competent authority must also notify the competent authority of each host Member State of its approval.[337]

Direct listings in the US. Equity issuance to public market investors in the US has traditionally followed the firm commitment process with one or more underwriters.[338] An underwriter requires discounts and commissions.[339] The cost of listings can be reduced by making direct listings easier (section 5.5).

332 Recital 41 of Regulation 2017/1129 (Prospectus Regulation).
333 Recital 43 of Regulation 2017/1129 (Prospectus Regulation): "To speed up the process of preparing a prospectus and to facilitate access to capital markets in a cost-effective way, frequent issuers who produce a universal registration document should be granted the benefit of a faster approval process, since the main constituent part of the prospectus has either already been approved or is already available for the review by the competent authority. The time needed to obtain approval of the prospectus should therefore be shortened when the registration document takes the form of a universal registration document."
334 See Article 27 of Regulation 2017/1129 (Prospectus Regulation).
335 Recital 67 of Regulation 2017/1129 (Prospectus Regulation).
336 Article 24 of Regulation 2017/1129 (Prospectus Regulation).
337 Article 25 of Regulation 2017/1129 (Prospectus Regulation).
338 Special Study of Securities Markets (1963a) p 493; Auerbach J, Hayes SL (1986) p 3.

In the US, Silicon Valley bankers and lawyers have been lobbying for direct listings as an alternative to IPOs.[340] While underwritten IPOs are still expected to remain attractive to most private companies,[341] direct listings are regarded as an alternative for cash rich "unicorns".[342]

Direct listings in the EU. In the EU, direct listings must be aligned with the Prospectus Regulation-[343]

The Prospectus Regulation requires the publication of a prospectus "when securities are offered to the public or admitted to trading on a regulated market situated or operating within a Member State".[344] Traditional main markets are "regulated markets" under MiFID II.[345] Where shares are made available for trading on a regulated market, a prospectus is required. This increases costs. An MTF is not a regulated market under MiFID II.[346] Therefore, when shares are simply made available for trading on an MTF, an approved prospectus is not necessary. This could reduce costs.

Additional requirements can be based on exchange rules. For example, they may include the use of sponsors and market makers (section 5.4.3). Such rules can increase costs, but, in practice, direct listings will not work without the help of advisers. This is a conclusion one can draw from American experiences.

Private placements and direct primary offerings. A direct listing customarily is preceded by private placements.[347] For example, placements are used in start-up and venture capital practice (sections 5.2 and 5.3). A direct listing could also be preceded by the issuing of private convertible notes.

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339 Special study of Securities Markets (1963a) pp 502–512. See even *ibid.*, pp 501–502 on abuses in pricing. An underwriter may even benefit from the practice of greenshoe that complements the over-allotment of shares. Nelson Smith, The greenshoe option. The Economist, Letters, 29 August 2020.

340 Miles Kruppa, SEC opens debate on finding alternatives to IPOs. US markets regulator hears arguments for enabling direct listings to raise capital. Financial Times, 17 October 2019.

341 Denenberg AF, Fausten M, Truesdell RD (2019).

342 See Jaffe MD, Rodgers G, Gutierrez H (2018); Coffee JC Jr (2018); Horton BJ (2019); Mark Baker, Direct listings: the future according to Goldman Sachs. Financial Times, 16 October 2019.

343 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

344 Article 1(1) of Regulation 2017/1129/EU (Prospectus Regulation).

345 Point (j) of Article 2 of Regulation 2017/1129/EU (Prospectus Regulation); point (21) of Article 4(1) of Directive 2014/65/EU (MiFID II).

346 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II).

347 *Ibid.*, pp 186–188.

The question is whether a direct listing may be followed by a direct primary offering. In a direct primary offering, the company offers new shares directly to investors without an underwriter.

In 2019, Stanford law professor Joseph Grundfest said in an interview that "[t]he time is ripe to have direct primary offerings" in the US. He summed up what this alternative would mean for IPOs: "If the [SEC] is interested in increasing the number of exits through IPOs rather than through mergers and acquisitions, this is the smartest thing they could do."[348]

A direct primary offering resembles an at-the-market (ATM) issuance, in which companies gradually sell new shares to investors on the open market. An ATM issuance thus is a follow-on equity issuance technique. ATM issuances were facilitated in the US by regulatory changes in 2005 (the 2005 Securities Offering Reform)[349] and 2008 (amendments to forms S-3 and F-3). ATM issuances are direct-from-shelf placements of nonunderwritten shares into the secondary market using a placement agent strictly as a broker.[350] The 2005 Securities Offering Reform opened the door for firms to issue shares under favourable market conditions. The 2008 amendments to Form S-3 increased access to shelf registration for smaller firms, and therefore even ATMs.[351]

In the US, direct listings have been constrained by two things. First, the issuer cannot raise any capital in a direct listing. Second, to be listed, the issuer must have 400 holders of its common stock prior to the listing. Only a small number of large private companies can satisfy this requirement.[352]

To address both limitations and to facilitate direct primary offerings, the NYSE submitted a proposal to the SEC in a November 2019 regulatory filing to amend its rules. The new rules would have applied to "primary direct floor listings". Under the proposed rule change, an issuer would have been able to sell newly issued primary shares on its own behalf directly into the opening trade, without a traditional underwritten public offering and with the IPO price determined by the opening trade auction.[353] The SEC did not approve the proposal. Its refusal was regarded as a setback.[354]

348 Miles Kruppa, Silicon Valley bankers and lawyers push for alternative to IPOs. Tech investors want companies to be able to raise cash through direct listings. Financial Times, 24 September 2019.

349 SEC Release No. 33 – 8591 (July 19, 2005) (Securities Offering Reform).

350 Billett MT, Floros IV, Garfinkel JA (2019) p 1264.

351 *Ibid.*, pp 1265 – 1267.

352 Denenberg AF, Fausten M, Truesdell RD (2019).

353 *Ibid.*

SPACs and reverse mergers or takeovers. Since direct listings do not include the issuing of shares, direct listings can only to a limited extent be regarded as functional equivalents to IPOs. It is easier to regard SPAC business combinations or de-SPACs as functional equivalents to IPOs and reverse takeovers.

A reverse merger or takeover requires the existence of one company that already is listed. It can be used as a shell when a privately-held company goes public. Since the privately-held company benefits from the existing listing, it does not necessarily need to fulfil the minimum requirements for an IPO or a direct listing and may therefore be of worse quality. A reverse merger can be complemented by an additional private capital investment (PIPE).[355] For example, this happened in the reverse merger of eToro.[356]

The use of Special Purpose Acquisition Companies (SPACs) is a related phenomenon (section 5.5.3). The number of US-listed SPACs was 53% of all US IPOs in 2020 and 75% in January-March 2021.[357]

De-SPACs therefore seem to be useful for some operating companies.[358] SPAC IPOs are simple, because a SPAC is an empty shell and has little to report. The listing of the operating company through a de-SPAC is simple, because the operating company negotiates a reverse takeover or other business combination with the SPAC's sponsors.

Most European firms chose a US-listed SPAC in 2020.[359] The UK Listing Review summed up what this means for UK regulators: "The bottom line from a competitive point of view is … clear: there is a real danger that the perception that the UK is not a viable location to list a SPAC is leading UK companies, notably fast-growing tech companies, to seek a US – or indeed EU – de-SPAC route for financing, rather than a transaction resulting in a London listing."[360] European regulators should address the same concerns.

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354 Miles Kruppa, NYSE direct listings proposal rejected by SEC. Decision delivers blow to efforts to expand the flotation procedure. Financial Times, 7 December 2019.

355 Sjostrom WK Jr (2008) pp 751–753.

356 SEC Form 8-K, Current Report Pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, Fintech Acquisition Corp. V, March 16, 2021, Exhibit 10.7, Form of PIPE Subscription Agreement.

357 Data Source: Nasdaq SPAC webpage, citing SPAC Research.

358 See Hill J (2021).

359 Nikou Asgari and Stephen Morris, European bankers set sights on Amsterdam as regional Spac capital. Financial Times, 17 February 2021; Munter P (2021).

360 Hill J (2021) section 2.4 p 30.

It is possible to adopt US SPAC structures for EU-listed SPACs such as SPACs listed on the Frankfurt or Amsterdam exchanges or Nasdaq's Nordic Markets.[361] Dutch law seems to allow even greater flexibility than the practices exhibited in the US market.[362]

According to a law firm, there are "a number of reasons why SPACs may prefer to be listed in Europe, including tax structuring considerations, the attractiveness of certain sponsors to European investors, more flexibility on Sarbanes-Oxley and certain corporate governance requirements imposed by the US stock exchanges, and the attractiveness of the areas of focus of certain SPACs to European investors."[363] However, the downside of EU-listed SPACs is that a US-listed SPAC would make it easier to offer securities to US investors.

In the US, one of the main regulatory concerns relates to the fact that the de-SPAC is a functional equivalent of an IPO for the operating company: "Said plainly, many investors in the SPAC's own initial offering are not the investors in the ultimate public company's ongoing business operations … If we do not treat the de-SPAC transaction as the 'real IPO,' our attention may be focused on the wrong place, and potentially problematic forward-looking information may be disseminated without appropriate safeguards."[364] This may require the regulation of de-SPACS.[365]

361 Nasdaq (2021) Nasdaq Nordic Main Market Q&A on SPAC listings: Questions and Answers on the admission requirements, the admission process and disclosure requirements for SPAC:s and the Business Combination. Version 3. Last update: 3 March 2021.

362 Freshfields Bruckhaus Deringer LLP (2021).

363 *Ibid.*

364 Coates J (2021).

365 *Ibid.:* "Are current liability protections for investors voting on or buying shares at the time of a de-SPAC sufficient if some SPAC sponsors or advisors are touting SPACs with vague assurances of lessened liability for disclosures? Do current liability provisions give those involved – such as sponsors, private investors, and target managers – sufficient incentives to do appropriate due diligence on the target and its disclosures to public investors, especially since SPACs are designed not to include a conventional underwriter at the de-SPAC stage? Moreover, is it appropriate that the choice of how to go public may determine or be determined by liability rules?"

6.4.3 Simplify Periodical Reporting and Ongoing Disclosure Obligations

There are extensive issuer obligations relating to periodical reporting and ongoing disclosures.[366] The resulting high compliance costs can be reduced by reducing or simplifying these obligations.

Reporting and ongoing disclosures generally should be simplified in order to reduce boilerplate text and noise.[367] Reporting and disclosures can be simplified if they are designed for retail investors rather than professional investors (section 6.4.10).

When simplifying periodical reporting obligations, it is better to reduce the number of disclosures than their quality (section 5.4.3). In practice, the question is whether to replace quarterly reports with half-yearly reports.

Reliance on reporting and public disclosures can be reduced by improving internal monitoring. The cost of reporting and public disclosures can be reduced by the convergence of financial accounting standards.

Simplify language and use more useful disclosure channels. One may ask whether disclosure language and channels can be simplified to reduce issuers' costs without prejudicing the interests of retail investors. This does seem possible.

In 2008, the SEC updated its interpretive guidance on the use of electronic media for disseminating information on a registrant's financial performance. The SEC published interpretive guidance on the use of company websites as a means for companies to communicate and provide information to investors in compliance with the federal securities laws and, in particular, the Securities Exchange Act.[368] The SEC also adopted rules to require filing of interactive data-tagged financial statements. The SEC announced the 21st Century Disclosure Initiative, with the goal of preparing a plan for future action to modernise the SEC's disclosure system. The Initiative's report, issued in 2009, recommended a new disclosure system in which interactive data would replace plain-text disclosure documents while retaining the substantive content and filing schedule of the

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366 Aggarwal R, Ferrell A, Katz J (2007); Gao X, Ritter JR, Zhu Z (2013) pp 1663 – 1664 on compliance costs as explanations for the prolonged drought in IPOs.

367 See, for example, second subparagraph of Article 15(1) of Regulation 2017/1129 (Prospectus Regulation) on an EU Growth prospectus.

368 SEC Release No. 33 – 10064, 34 – 77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.C, p 19, footnote 40. See SEC Release No. 34 – 58288 (Aug. 1, 2008) (Commission Guidance on the Use of Company Web Sites, "2008 Website Guidance").

current system.[369] However, ten years later, the use of a principles-based approach, narrative reporting and social media had emerged as potential ways to simplify reporting and disclosure obligations and increase their usefulness (section 6.4.10).

Corporate governance model. The corporate governance model matters, because reporting and disclosure obligations are connected to it. You need more regulation about public reporting and disclosures, where the monitoring function is external and decentralised. You need less regulation about public reporting obligations and disclosures, where the monitoring function is internal, centralised, and mixed.

Public reporting and ongoing disclosure obligations can be reduced with increased reliance on structures. A possible solution could be to first allocate the monitoring function to a supervisory board under a two-tier board model (section 2.4.7) and ensure that shareholders do not actively need to monitor management or the management board. At the same time, public disclosure rules could partly be replaced by mandatory provisions of law laying down conduct norms. To make sure that such conduct norms are in the interests of the firm and not too onerous, open standards could be used (section 2.4.11), in particular the duty to act in the interests of the firm (section 2.4.13). The efficiency of the internal monitoring function could be increased by rules on built-in diversity on the supervisory board and mixed monitoring.

Convergence of financial reporting standards. Costs can be reduced if companies use the same financial reporting standards regardless of the country (section 2.4.8) and whether companies have publicly-traded shares or not.

There is convergence of IFRS and US GAAP. In 2002, the IASB and FASB agreed on a "best efforts" convergence approach in a Memorandum of Understanding known as the Norwalk Agreement. The Boards "pledged to use their best efforts to: (a) make their existing financial reporting standards fully compatible as soon as is practicable, and (b) to coordinate their future work programs to ensure that once achieved, compatibility is maintained."[370]

369 SEC (2009). See also SEC Release No. 33–9002 (Jan. 20, 2009) (Interactive Data to Improve Financial Reporting, "Interactive Data Release"); SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K), II.C, p 19, footnote 41.

370 Financial Accounting Standards Board and International Accounting Standards Board, Memorandum of Understanding, "The Norwalk Agreement" (18 September 2002); Nicolaisen DT (2005) p 672.

6.4.4 Simplify Prospectus and Disclosure Rules for SMEs

SMEs are more likely to issue shares to the public where the legal framework that governs the issuing and ongoing compliance obligations is designed to foster the interests of SMEs. To increase the number of SMEs with publicly-traded shares, it would be necessary to simplify listings and public offerings in general, simplify prospectus requirements in general, simplify ongoing financial disclosures in general, and use regulatory dualism to create a simple regulatory regime for SMEs in particular.

Simplifying prospectus and disclosure rules for SMEs can mean regulatory dualism in three respects. There can be exemptions or more favourable rules for small issuers, small issuings that are characteristic of small issuers, or particular kinds of issuings that benefit small firms. We can have a brief look at such cases of regulatory dualism through the lens of the EU Prospectus Regulation and the US JOBS Act.

Simplifying prospectus requirements for SMEs in the EU. In the EU, prospectus requirements were to some extent simplified by the Prospectus Regulation.[371] The Prospectus Regulation applies "when securities are offered to the public or admitted to trading on a regulated market situated or operating within a Member State".[372] The Regulation does not require the publication of a prospectus for the mere admission of securities to trading on an MTF but does require the publication of a prospectus when a communication constitutes an "offer of securities to the public".[373] The Regulation provides for an EU Growth prospectus and exemptions from the duty to publish a prospectus.

The EU Growth prospectus is only available to certain issuers listing their securities on certain markets. Provided that they have no securities admitted to trading on a regulated market, the EU Growth prospectus regime is available to "SMEs" defined in the Prospectus Regulation[374] and, on certain conditions, even "issuers, other than SMEs", depending on where their securities are traded

371 Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.
372 Article 1(1) of Regulation 2017/1129/EU (Prospectus Regulation).
373 Recital 14 of Regulation 2017/1129/EU (Prospectus Regulation): "The mere admission of securities to trading on a MTF or the publication of bid and offer prices is not to be regarded in itself as an offer of securities to the public and is therefore not subject to the obligation to draw up a prospectus under this Regulation. A prospectus should only be required where those situations are accompanied by a communication constituting an 'offer of securities to the public' as defined in this Regulation."
374 Point (f) of Article 2 of Regulation 2017/1129 (Prospects Regulation).

or are to be traded, average market capitalisation, cumulative afters in the EU over a period of 12 months, and the number of employees.[375] The Commission has adopted a Delegated Regulation to supplement the Prospectus Regulation "by specifying the reduced content and the standardised format and sequence for the EU Growth prospectus, as well as the reduced content and the standardised format of the specific summary".[376]

Because of the limited availability of the EU Growth prospectus, an important way to make it easier for SMEs to issue shares is limiting the scope of the duty to publish a prospectus. The obligation to publish a prospectus does not apply to certain offers of securities.

For example, the Prospectus Regulation does not apply to "an offer of securities to the public with a total consideration in the Union of less than EUR 1 000 000, which shall be calculated over a period of 12 months".[377]

The obligation to publish a prospectus does not apply to: "… (a) an offer of securities addressed solely to qualified investors; (b) an offer of securities addressed to fewer than 150 natural or legal persons per Member State, other than qualified investors; (c) an offer of securities whose denomination per unit amounts to at least EUR 100 000; (d) an offer of securities addressed to investors who acquire securities for a total consideration of at least EUR 100 000 per investor, for each separate offer; … (i) securities offered, allotted or to be allotted to existing or former directors or employees by their employer or by an affiliated undertaking provided that a document is made available containing information on the number and nature of the securities and the reasons for and details of the offer or allotment; …"[378]

Moreover, the obligation to publish a prospectus does not apply to certain M&A transactions that can be important for SMEs looking for growth and synergy effects. It does not apply to: "… (e) shares issued in substitution for shares of the same class already issued, if the issuing of such new shares does not involve any increase in the issued capital; (f) securities offered in connection with a takeover by means of an exchange offer, provided that a document is made avail-

375 First subparagraph of Article 15(1) of Regulation 2017/1129 (Prospectus Regulation).
376 Article 15(2) of Regulation 2017/1129 (Prospectus Regulation). See Chapter IV of Commission Delegated Regulation (EU) 2019/980 of 14 March 2019 supplementing Regulation (EU) 2017/1129 of the European Parliament and of the Council as regards the format, content, scrutiny and approval of the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Commission Regulation (EC) No 809/2004.
377 First subparagraph of Article 1(3) of Regulation 2017/1129 (Prospectus Regulation).
378 Article 1(4) of Regulation 2017/1129 (Prospectus Regulation). See also recital 15 on offers addressed exclusively to a restricted circle of investors who are not qualified investors.

able to the public in accordance with the arrangements set out in Article 21(2), containing information describing the transaction and its impact on the issuer; (g) securities offered, allotted or to be allotted in connection with a merger or division, provided that a document is made available to the public in accordance with the arrangements set out in Article 21(2), containing information describing the transaction and its impact on the issuer; [or] (h) dividends paid out to existing shareholders in the form of shares of the same class as the shares in respect of which such dividends are paid, provided that a document is made available containing information on the number and nature of the shares and the reasons for and details of the offer; ..."[379] Article 21(2) describes doucuments made available to the public in electronic form ob certain websites.

Exemptions or more favourable rules for small issuers. Generally, small issuers are not exempt under securities laws. Securities laws have been designed with relatively established issuers in mind.

There can nevertheless be rules designed to benefit issuers that are small. In the US, Title I of the Jumpstart Our Business Startups (JOBS) Act of 2012 exempted "emerging growth companies"[380] from certain disclosure duties and other obligations.

It is customary to exempt small issuings under securities laws. On one hand, the full application of the provisions of securities laws might seem unreasonable, when the issuing is small. The high cost of regulatory compliance could outweigh the benefits of raising capital and, in effect, prohibit these issuings. Small issuings are unlikely to pose a threat to the financial system, and individual investors can be protected in other ways. On the other, there are increased risks for investors caused by the illiquidity of small-cap securities and the opacity of small issuings.[381] The US regime is issuer-friendly in this respect. Title IV of the JOBS Act of 2012 directed the SEC to adopt rules exempting from the registration requirements of the Securities Act offerings of up to $50 million of securities annually.[382]

There is a wide range of issuings and exemptions that are particularly useful for small firms. For example Title III of the JOBS Act added an exemption from

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379 Article 1(4) of Regulation 2017/1129 (Prospectus Regulation).

380 Section 101(a) of the JOBS Act added Section 2(a)(19) to the Securities Act of 1933 as follows: "(19) The term 'emerging growth company' means an issuer that had total annual gross revenues of less than $1,000,000,000 ..." The thresholds are indexed for inflation. Section 101(b) of the JOBS Act added a similar Section 3(a)(80) to the Securities Exchange Act of 1934.

381 Recital 51 of Regulation 2017/1129 (Prospectus Regulation).

382 Section 401 of the JOBS Act added Section 3(b)(2) to the Securities Act of 1933. The SEC adopted the necessary rules in Regulation A+ that expanded the earlier Regulation A.

registration for certain crowdfunding transactions[383] and permitted equity crowdfunding.[384]

6.4.5 Limit the National Scope of Securities Law

There is less room for alternative systems if there is just one regulatory system for stock markets, it has a large scope, and the intensity of regulation is high. To facilitate the emergence of alternative systems of securities markets organisation, it is necessary to limit the scope of securities law.

Limiting the scope of securities law means addressing its national scope and international scope. We will first focus on limiting the national scope of securities law and discuss its international scope in the next section (section 6.4.6).

Main components of scope. The national scope of securities law seems to be made of six components, namely components related to classification, market integration, industrial policy, competition policy, the protection of interests, and the regulatory regime's technical scope. One of the components of its technical scope is the definition of qualified investors (such as "accredited investors" or "professional investors") that are subject to a less restrictive regime. This mix of components is influenced by political preferences, possibly by regulatory capture,[385] and the broad range of arguments customarily used in the interpretation of legal norms.[386]

Because of the large number of factors influencing the national scope of securities law, it would be necessary to address many potentially conflicting things to create room for alternative systems and reach the goal of this book, that is, to increase the number of companies with publicly-traded shares and retail investors' direct investments in such shares.

Classification. First, the national scope of what can be described as "securities law" in the functional sense is a question of choosing the areas of law in which certain issues are regulated (the classification of issues). The scope and intensity of national regulatory regimes depends on the country and the area of law. For example, as regards the intensity of regulation, there is a laissez-

383 Section 302 of the JOBS Act added Section 4(a)(6) to the Securities Act of 1933.
384 SEC Release No. 33–9974 (Oct. 30, 2015) (Regulation Crowdfunding). SEC Release No. 33–10332 (March 31, 2017) is a release adopting inflation adjustments to the dollar amount thresholds in Regulation Crowdfunding.
385 For regulatory capture, see Stigler GJ (1971).
386 von Savigny FK (1840) Book I, Chapter IV, § 33. For the interpretation of EU secondary law, see, for example, Riesenhuber K (2017).

faire approach in traditional English commercial law[387] but not in traditional continental European commercial law that is based on codifications and codes. Moreover, after it was adopted in the 1930s, US securities law exceeded continental European securities law for a long time law both in its broader scope and higher intensity of regulation (Chapter 4).

Now, certain issues can be regulated either in company law or securities law. For example, in Germany, the largely mandatory Aktiengesetz that applies to large limited-liability companies governs several issues that in the US or the UK traditionally would fall within the scope of securities law. While company law belongs to private law, much of securities law does not, as securities markets are supervised by public authorities. Private law and public law are not necessarily based on the same legal or philosophical foundations.

Moreover, one can assume that the contents of norms addressing certain issues will depend on whether they are designed to apply to small limited-liability companies, all limited-liability companies, large limited-liability companies, or only to those particular limited-liability companies that have securities accepted to trading on a venue.

Because of this connection between classification, scope, and content, it is possible to use classification as a technique to increase the number of companies with publicly-traded shares and retail investors' direct investment in shares. We can have a look at how this could be done.

Where the relevant issues are regulated in "company law", the regulatory regime is expected to apply to many kinds of companies. Norms that belong to a broad company law regime would probably have to be more general and less costly to comply with, because these norms need to be applied in a large number of cases, in different kinds of cases, and by different kinds of firms. A broad company law regime can mean that the same regulatory regime applies to companies with privately-held shares and companies with publicly-traded shares. Where the same norms apply to all or many companies regardless of whether they have publicly-traded shares or not, the threshold of going public is made lower.

National doctrinal classification may be reflected in classification for the purposes of international private law. A company law regime would not be applicable to foreign companies (in countries that apply a similar classification regime and the incorporation doctrine, because the law that governs company law matters would be designated by the country of incorporation). A company law regime would thus increase the international recognition of foreign regimes and reduce the need to comply with the norms of multiple jurisdictions.

387 See, for example, Goode RM (1998) pp 31–32.

Where the relevant issues are regulated in "securities law", the regulatory regime applies in a much narrower context and tends to be adapted to fewer interests. These norms can thus be more specific and more aligned with particular interests.

Moreover, questions of securities law can be applicable to both national and foreign companies, increasing the international scope of the regulatory regime. A securities law regime would thus reduce the international recognition of foreign regimes and increase the need to comply with the norms of multiple jurisdictions.

For these reasons, if the objective is to increase, by limiting the scope of securities law, the number of companies with publicly-traded shares and retail investors' direct investments in shares, the better alternative seems to be to regulate the relevant issues primarily in company law. A company law regime designed primarily for large companies that can have publicly-traded shares may nevertheless need to be complemented by a particular company law regime for small companies that cannot have publicly-traded shares (section 2.4.9) and, to the extent that supervision by a securities regulator or financial supervision authority is necessary, by a securities law regime.

This proposal may sound counterintuitive in the light of the fact that the US is perceived as the country of listed companies and Germany as the country of privately-held companies.[388] Of the two countries, Germany has a large company law regime. The US has a large securities law regime. However, real-life corporate governance patterns and regulatory patterns are the aggregate outcomes of many things. For example, company law and securities law are not really alternatives for US regulators. Corporate law is state law. The competition for incorporations between states has influenced corporate law in the US and contributed to a small and flexible company law regime in states such as Delaware that have prevailed in competition.[389] There is no federal incorporation in the US (section 2.4.9). The

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388 In fact, there were much more publicly-traded companies per one million inhabitants in Germany than in the US in 1913. See Burhop C, Chambers D, Cheffins BR (2015) on the high number of IPOs in Germany in the late nineteenth and early twentieth centuries.

389 Morrison & Foerster LLP (2017) pp 1 and 4: "[W]e examined the filings of (i) the approximately 680 EGCs (on an aggregated basis) that completed their IPOs in the period from January 1, 2013, through December 31, 2016, and (ii) the 100 EGCs (on a standalone basis) that completed their IPOs during the year ended December 31, 2016. [...] Of the 526 domestic companies, 87.3% were incorporated in Delaware, followed by Maryland (5.1%), Texas (1.1%), and Nevada (1.0%). All of the Maryland-incorporated issuers were real estate investment trusts ('REITs') because Maryland's corporate law has specific accommodations for REITs."

rise of large nationwide securities markets contributed to a large federal securities law regime and vice versa (section 4.1). In contrast, unified Germany could adopt a large nationwide company law regime in the nineteenth century (section 2.4.3). This regime, in particular the company law reform (Aktienrechtsnovelle) of 1884,[390] addressed the kinds of abuses that were later addressed by US federal securities law. The two countries have been on different paths for a long time.

In any case, the Sarbanes-Oxley Act of 2002 is an example of what happens when the securities law regime addresses questions of corporate governance that in other countries fall within the scope of the mandatory provisions of company law. The number of foreign listings is reduced unless the two regimes are aligned.[391]

Market integration. Second, the scope of securities law is a question of market integration. States generally need to reduce transaction costs and perceived risks such as counterparty risks and legal risks. To facilitate cross-border business, states need relatively similar regulatory frameworks that address the same issues in roughly the same way. As the number, volume, and complexity of transactions increase, the integration of securities markets is likely to increase the scope of the regulatory regime and the intensity of regulation.

For example, the integrated American securities markets are facilitated by a large securities law regime that largely is federal law. In the EU, the internal market for financial services is based on a large body of EU legislation with the Financial Services Action Plan (FSAP) as the first legislative programme designed to create a single market for financial services.[392]

The integration of securities markets across national boundaries goes hand in hand with regulatory convergence. Market integration increases the intensity of regulation. To ensure that there is room for alternative regimes, it would be important to focus on the overall scope of the regulatory regime and use exemptions.

While the volume of cross-border securities transactions can be very high, the number of cross-border transactions in legal entities must be much smaller. The lower level of market integration in this respect is reflected in company law. In the US, company law is state law. In practice, the freedom to choose the place

390 Gesetz, betreffend die Kommanditgesellschaften auf Aktien und Aktiengesellschaften. Vom 18. Juli 1884.

391 See, for example, Steil B (2002b) p 10.

392 The purpose of the Financial Services Action Plan (FSAP) was to create a single market for financial services within the EU by the end of 2004. The cornerstone of the FSAP was the Markets in Financial Instruments Directive 2004/39/EC (MIFID).

of incorporation, competition for incorporations, and “a race to the bottom”[393] have produced flexible company law regimes with the Model Business Corporation Act (MBCA) providing guidance for the different states. In the EU, Directive (EU) 2017/1132[394] addresses many aspects of company law, but much has not been harmonised. Again, the classification of issues as company law issues rather than securities law issues and the use of exemptions from the securities law regime for company law transactions would help to reduce the scope of the securities law regime and the intensity of regulation.

Industrial policy. Third, the national scope of securities law is a question of what sectors of economy and industries the regulators prefer to develop (industrial policy).

Generally, you need sector-specific regulation rather than a laissez-faire approach[395] to develop any sector of economy. In the absence of sector-specific regulation, the development of a sector would be hampered by higher transaction costs, higher perceived risk, and actual abuse. Reliance on freedom as the default rule would, therefore, be likely to keep the sector smaller. Specific sector-specific regulation can help to facilitate the sector’s growth.

If the state wants to develop two separate sectors, it needs to adopt two sector-specific regulatory frameworks.

Therefore, the large scope of the legal framework for established industries and the legal framework that helps to allocate business to established industries can hamper the growth of industries that can provide an alternative. Since these alternatives sooner or later will be developed in one or more countries and some of the alternatives have potential to become disruptive, a country’s economy might be held back in the long run if the regulatory regime for established industries has a too large scope. The same can of course be said of overregulation in general.

The large scope of the legal framework of financial intermediation and the large scope of the legal framework that helps to allocate business to financial intermediators can hamper the development of new business models and industries in the financial sector. In other words: When regulators design the legal

393 The notion of a “race to the bottom” was coined by Berle AA, Means GC (1932). It was accepted by US Supreme Court Justice Louis Brandeis in his dissenting opinion in Louis K. Liggett Co. v. Lee, 288 U.S. 517 (1933). In Liggett v Lee, Brandeis describes how firms were formed in US “states where the cost was lowest and the laws least restrictive” which led to a race “not of diligence but of laxity”.

394 Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law.

395 According to Ostrom E (2005) p 210, the default rule is general freedom.

framework with the interests of financial intermediation in mind, they implicitly take decisions of industrial policy.

Competition policy. Fourth, the national scope of securities law is linked to economies of scale for incumbent firms and barriers to entry for potential entrants. Therefore, the national scope of securities law is a question of competition policy.

For example, it is customary to refer to the need to ensure “a level playing field” between the suppliers of products and services that are functional equivalents. One can clearly see this development in the regulation of financial services. Ensuring “a level playing field” in financial services is intended to have an effect on competition.

Where the scope of the regulatory regime is large, the regulatory regime covers a larger number of activities and products. Such a large regulatory regime enables incumbent firms to reach economies of scale in a larger market. A larger regulatory regime ensuring “a level playing field” is likely to increase intra-industry competition at first. But since it contributes to concentration in a larger product market, it will end up reducing intra-industry competition. Moreover, a larger product market created by a larger regulatory regime is likely to reduce competition between industries.

Where the scope of the regulatory regime is small, the regulatory regime is likely to create smaller economies of scale and contribute less to concentration in economy. There will thus be room for more smaller competitors and more inter-industry competition.

If this is true, the large scope of the regulatory regime for financial markets has probably contributed to the concentration of banking and financial services. To increase inter-industry competition, it would again be necessary to limit the scope of the securities law regime applicable to incumbent firms.

Protection of interests. Fifth, the national scope of securities law generally is a question of choosing the interests protected by regulation and the level of protection.

For example, the purpose of securities law could be to facilitate economic growth, to protect firms, to protect investors in general, to protect the financial system, or to protect each individual investor.

The choice of the interests to be protected tends to be reflected in the issues that are regulated. In other words, the way to use securities law as a tool depends on the context and on the interests that are the “user” of this legal

tool.[396] The more interests securities law seeks to protect and the more conflicting these interests are, the greater the scope of the regulatory regime.

For example, the primary objective of the German Exchange Act (Börsengesetz) of 1896 was to strengthen the functioning of the exchange and the trading process. Investor protection was only a secondary objective.[397] The Securities Exchange Act of 1934, as amended by the Securities Acts Amendments of 1975, has multiple objectives.[398] So does EU securities law that must reflect objectives laid down by the EU Treaties.[399] All other things being equal, the Securities Exchange Act of 1934 and EU securities law must have a much larger scope than the German Exchange Act of 1896 (section 4.2.2).

To limit the national scope of securities law, there should be one or more reasons for doing so. Such reasons will not matter, unless they are recognised as interests worthy of protection and included in the wording of new legislation as objectives of securities law.

For example, the EU Prospectus Regulation recognises the benefits of employee share ownership and accordingly provides for a related exemption from the duty to publish a prospectus. The exemption even covers the employee-share schemes of third country issuers such as technology firms in Silicon Valley.[400]

Generally, there is a choice between protecting the interests of retail investors as a class or the interests of individual retail investors. For example, the US Securities Acts seem to have protected investors as a class[401] rather than each individual retail investor.[402] EU securities law protects both investors as a class and individual retail investors.[403]

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396 In "user-friendly legal science", it is assumed that "users" use "legal tools and practices" to reach their objectives in different contexts. See Mäntysaari P (2017). These "users" are not limited to firms and states. They can include the full range of actors of the "actor-network theory" (ANT).

397 Fleckner AM, Hopt KJ (2013) p 544.

398 Section 11A of the Securities Exchange Act of 1934; Section 7 of the Securities Acts Amendments of 1975.

399 Article 3(3) of the Treaty on European Union.

400 Recital 17 of Regulation 2017/1129 (Prospectus Regulation).

401 See Kitch EW (2001) p 649: "The securities acts were based in part on the assumption that investors are unable to protect themselves … The problem is that if the investors lack the sense to protect themselves, they probably also lack the sense to make any use of the disclosures."

402 See *ibid*., p 649: "Since … sophisticated participants will set the market price, the helpless investor is protected by simply relying on the market price … If this argument is correct, then why … would the sophisticated users of disclosure documents not also insist that they be provided with suitable disclosure documents before they consider purchase of the security?"

403 See, for example, Mäntysaari P (2010a) p 434.

Protecting the interests of individual retail investors tends to lead to more intensive regulation as individual retail investors are not homogeneous and regulation will need to address the question of finding out what their interests are (such as the know-your-customer rule) and the question of how to address them (such as the rule of suitability of products or investment advice).

Focusing on the interests of individual retail investors might contribute to a market model under which retail investors are expected to use the services of specialised financial intermediators that are in a position to take into account the (actual or characteristic) circumstances of each individual retail investor.

Moreover, protecting the interests of individual retail investors can increase the scope of the regulatory regime such as by providing a level playing field for firms the services or products of which are functional equivalents from the perspective of a retail investor.

To ensure that there is room for alternative regimes that can, first, increase competition and reduce the cost of financial intermediation as a whole and, second, facilitate retail investors' direct equity investments in many more companies, it would be better to protect the interests of retail investors as a class than the interests of each individual retail investor. Moreover, increasing competition, reducing the cost of financial intermediation as a whole, and facilitating retail investors' direct equity investments in many more companies should be included in the objectives of securities law.

Technical scope. Sixth, the technical scope of national securities law depends on the scope of its core terms and notions. The scope of the core terms of securities law reflects the choice of its core interests.

For example, the EU Prospectus Regulation applies "when securities are offered to the public or admitted to trading on a regulated market situated or operating within a Member State".[404] The scope of the regulatory regime thus depends on the wide or narrow definition of several notions such as "offering", "offering to the public", and a market being "situated or operating within a Member State".[405]

In the US, the Securities Act of 1933 lays down a registration obligation as to a "security". Without a registration, it is unlawful for any person, "directly or indirectly", "to make use of any means or instruments of transportation or communication in interstate commerce or of the mails to sell such security", or "to carry or cause to be carried through the mails or in interstate commerce, by any means or instruments of transportation, any such security for the purpose of sale or for

404 Article 1(1) of Regulation 2017/1129 (Prospectus Regulation).

405 For definitions, see Article 2 of Regulation 2017/1129 (Prospectus Regulation).

delivery after sale".[406] The scope of this regulatory regime thus depends on how to interpret "direct or indirect selling", "direct or indirect use of any means of communication" and "interstate commerce". Such open terms can be interpreted in many ways and can support many alternative outcomes depending on whose preferences prevail.[407]

Accredited investors, professional investors. While retail investors customarily are protected by the full force of securities law, qualified investors are not. Securities law tends to permit transactions with qualified investors such as "accredited investors" as defined in Regulation D (in the US) or "professional investors" as defined in MiFID II (in the EU).

Under federal securities laws, a company that offers or sells its securities must register the securities with the SEC or find an exemption from the registration requirements. Federal securities laws provide companies with a number of exemptions. For example, the Supreme Court held in the *Ralston Purina* case that "[a]n offering to those who are shown to be able to fend for themselves is a transaction 'not involving any public offering.'"[408] Some exemptions therefore relate to "accredited investors".[409] A company may sell its securities to "accredited investors" under Rule 506 of Regulation D. The term accredited investor is defined in Rule 501 of Regulation D.

The purpose of MiFID II is to protect investors. Measures to protect investors are to some extent adapted to the particularities of each category of investors (retail, professional and counterparties). The most basic standards apply to the provision of services irrespective of the categories of clients concerned.[410] Professional clients entitled to a lower level of protection have been defined in Annex II to MiFID II. Some clients may be treated as professional clients on request provided that certain criteria are satisfied are met. However, the threshold is high and in effect excludes retail investors.

406 Section 5 of the Securities Act of 1933.

407 For example, one can apply Friedrich Carl von Savigny's well-known canons of interpretation. See von Savigny FK (1840) Buch I, Kap. IV, § 33. For rhetoric in the interpretation of legal norms, see Mäntysaari P (2016) and Mäntysaari P (2017) section 7.3.

408 SEC v. Ralston Purina Co., 346 U.S. 119, 125 (1953); Peirce HM (2020).

409 After amendments made by the JOBS Act 0f 2012 and the FAST Act of 2015, Section 12(g)(1) of the Exchange Act of 1934 requires an issuer that is not a bank, bank holding company, or savings and loan holding company to register a class of equity securities if the securities are held of record by either (i) 2,000 persons, or (ii) 500 persons who are not accredited investors and the issuer has total assets exceeding $10 million. Banks, bank holding companies and savings and loan holding companies with total assets exceeding $10 million must register a class of equity securities if the securities are held of record by 2,000 or more persons.

410 Recital 86 of Directive 2014/65/EU (MiFID II).

A lower threshold for qualifying as an "accredited investor" or a "professional investor" could make it easier for more investors to participate in private investment projects.[411] For example, the JOBS Act 3.0 included such a proposal.[412]

In 2020, the SEC decided to broaden the pool of "accredited investors".[413] The amendments revised Rule 501(a), Rule 215, and Rule 144A of the Securities Act. For example, some of the amendments to the accredited investor definition in Rule 501(a): added a new category to the definition that permits natural persons to qualify as accredited investors based on certain professional certifications, designations or credentials or other credentials issued by an accredited educational institution; included as accredited investors, with respect to investments in a private fund, natural persons who are "knowledgeable employees" of the fund; and included new rules for persons or entities with $5 million in assets. According to Commissioner Peirce, the changes were "rooted in a recognition that wealth and income are not always great proxies for an investor's sophistication". Moreover, the amendments "add a catch-all category for entities owning investments in excess of $5 million and that are not formed for the specific purpose of acquiring the securities being offered".[414]

Conclusion. To make room for an alternative regime, the national scope of securities law should be limited. To achieve a limitation of its scope, it is necessary to take into account all six main components that contribute to its scope: classification, market integration, industrial policy, competition policy, the prevailing interests, and technical scope. This requires many policy choices.

411 Catalini C, Fazio C, Murray F (2016) p 3: "Regulators should not lose sight of Title II – the provision of the JOBS Act permitting accredited investors to use equity crowdfunding – as an alternative pathway for achieving some of Title III's initial goals. By experimenting with the scope and terms of accreditation, regulators may be able to extend the success of equity crowdfunding enabled by Title II (e.g. on platforms like AngelList and FundersClub – particularly when combined with online syndication) to a broader set (but not the complete universe) of investors." See also SEC Release Nos. 33–10649, 34–86129 (June 18, 2019) (Concept Release on Harmonization of Securities Offering Exemptions).

412 The JOBS Act 3.0 included the Fair Investment Opportunities for Professional Experts Act (H.R. 1585). H.R. 1585 would have amended the definition of "accredited investor" under Regulation D. The JOBS Act 3.0 included even the Family Office Technical Correction Act of 2017 (H.R. 3972). H.R. 3972 would have clarified that family offices and family clients are accredited investors under Regulation D.

413 SEC Release Nos. 33–10824, 34–89669 (August 26, 2020) (Accredited Investor Definition); SEC Modernizes the Accredited Investor Definition, Press Release, August 26, 2020.

414 Peirce HM (2020).

6.4.6 Limit the International Scope of Securities Law and Use Mutual Recognition

May companies issue shares to foreign retail investors? Do foreign retail investors have access to secondary trading? Companies from small countries are constrained by local financial circumstances unless they can issue shares to foreign investors and foreign investors have access to secondary trading.[415] Whether retail investors may invest in shares issued by foreign companies may depend on foreign issuers' regulatory compliance obligations in the country where the retail investors are located (retail investors' home country).

The cost of regulatory compliance and exposure to foreign legal risk give issuers incentives to avoid foreign markets. To reduce legal risk, it is customary for an issuer to limit the share issuing to certain countries only and to exclude other countries by legal waivers and technical measures.[416] For example, to avoid US securities laws, foreign issuers tend to exclude US investors by using legal waivers and technical precautions. Euronext N.V. used the following wording in connection with a prospectus dated 10 June 2014: "This communication is intended only for (I) persons located outside the United States meeting applicable restrictions and (II) qualified institutional buyers ('QIBS') as defined in Rule 144A under the Securities Act. By accepting delivery of this communication you are representing that you are either a person who is located outside the United States meeting applicable restrictions or a QIB." This practice is likely to reduce the opportunities of retail investors to make direct equity investments in foreign companies.

Retail investors have greater investment opportunities, if their home-country securities laws do not restrict investment in shares issued by foreign companies. It would therefore be possible to increase choice by limiting the international scope of retail investors' home-country securities law or, where their home-country securities law does apply, the scope of its substantive provisions. Limiting the scope of securities law thus means addressing the national scope of securities law (section 6.4.5) and its international scope.[417]

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415 Kudrna Z (2016) p 8.

416 See, for example, Mäntysaari P (2010a) p 414.

417 See even Fox MB, Glosten LR, Greene EF, Patel MS (2018) p 30: "Drawing in the wrong place the lines of the reach of any given U.S. rule can be very disadvantageous. On the one hand, too broad a reach may unnecessarily scare away primary and secondary transactions from the United States. On the other hand, drawing it too narrowly can leave U.S. interests unprotected. Given the wide range of different U.S. securities law rules and regulations, this is an area requiring more conceptual thinking than it has been given so far."

To increase choice, regulators could limit the international scope of the securities laws of the retail investors' home country and use mutual recognition to let issuers benefit from the international scope of the securities laws of the particular country they have the closest connection to (such as the country of incorporation and listing). The international scope of the securities law of the retail investors' home country can be limited by addressing questions of classification (section 6.4.5), connection, openness of substantive norns, and extraterritoriality. This might require fundamental changes.

Connection to the US. The international scope of securities law depends on the applicable choice of law rules and the substantive norms of national securities law. The connection that triggers the international application of a regulatory regime is laid down by choice of law rules. What kind of connection will trigger regulatory compliance obligations under the laws of retail investors' home country? This issue can be illustrated with the US Securities Acts and EU securities law. There are differences between these two regulatory regimes in this respect.

The application of US federal securities law is mainly triggered by (a) the listing of securities in the US or (b) the number of persons holding securities in the US combined with the size of the company. The federal Securities Acts apply to "the purchase or sale of a security listed on an American stock exchange" or "the purchase or sale of any other security in the United States" (*Morrison*).[418] The Securities Act of 1933 makes it unlawful to offer or sell any security without registering it where there is use of any "means or instruments of transportation or communication in interstate commerce or of the mails". Before the Securities Acts Amendments of 1964, issuer duties under the Securities Acts were triggered by primary issuings and listings in the US.[419] There was a difference between listed and OTC-traded securities after the primary issuing.[420] The situation changed

418 Morrison v. National Australia Bank Ltd., 561 U.S. 247 (2010). See even Staff of the SEC (2012).

419 Buxbaum RM (1969) p 361: "All these burdens, however, only arise following one or the other of two controllable events: A primary distribution of the issuer's stock on the American capital market in order to raise capital here, or the voluntary listing of a class of the issuer's stock on a national exchange in order to enjoy an orderly trading market in the United States."

420 Special Study of Securities Markets (1963b) pp 2–3: "The act applies whether or not the securities offered are part of an issue listed on an exchange … Once the distribution process has been completed and securities are outstanding, however, the safeguards applicable to listed and unlisted securities are quite different." Owens HF (1964) p 5: "Prior to the enactment of the 1964 Amendments, the only successful, albeit limited, effort to extend the reporting requirements of the Exchange Act into the over-the-counter markets was Section 15(d), which has been in effect since 1936."

with the passage of the Securities Acts Amendments of 1964.[421] At the time, it was said that the amendments "effectively remove the artificial distinction which has existed as to a large number of the companies whose securities are traded over-the-counter."[422] Since listed and OTC-traded securities were treated in the same way, it became important to rely on SEC exemptions that even take into account the number of shareholders and the size of the company.[423] The use of ADRs was addressed as well.[424]

Connection to the EU. EU securities law reflects a lower level of market integration and harmonisation and applies on a piece-meal basis. For this reason, it would not be possible to use a general connection designating the governing law in securities law matters. Moreover, there is the question of classification. In company law matters, the governing law is designated by the country of incorporation.

EU legislative acts either do or do not expressly designate the governing law. As a rule, the substantive provisions of EU legislative acts create Member State duties that are not limited to the substantive norms of Member States' laws but may cover Member States' choice of law rules. The international scope of duties based on EU legislative acts depends on the legislative act.

For example, where the question is about market abuse, the core connection under the provisions of the Market Abuse Regulation (MAR) is territory. Each Member State applies the provisions of MAR to actions carried out on its territory and to actions relating to securities traded on a venue operating in its territory.[425] Disclosure duties under the Market Abuse Regulation do not apply to issuers of shares that are not publicly-traded.[426]

421 Buxbaum RM (1969) p 361; Owens HF (1964) p 5: "The 1964 Amendments extend, by the addition of a new Section 12(g), the registration, reporting, proxy and insider provisions of the Exchange Act to issuers with total assets of more than $1,000,000 and a class of equity securities held of record by 750 or more persons. After July 1, 1966, the shareholder requirement will be reduced to 500."

422 Owens HF (1964) p 4.

423 See Buxbaum RM (1969) p 362 on the relevant SEC releases: "These regulations, which cover only the registration process, provide that registration is not required if there are less than three hundred shareholders (of a world-wide total of at least five hundred shareholders) of a class of securities resident in the United States."

424 *Ibid.*, pp 362–363: "If the foreign securities are not directly owned but are deposited in exchange for American Depositary Receipts, no registration duty is imposed upon the latter as such, consonant with earlier established practice, but individual holdings of ADRs are counted with holdings of foreign share certificates in calculating the three hundred shareholders in those cases where both forms co-exist."

425 Articles 2(1) and 22 of Regulation (EU) No 596/2014 (MAR).

426 Article 2(1) of Regulation 596/2014 (Market Abuse Regulation).

As regards EU prospectus rules in equity issuings, the core connection is the home Member State of the issuer[427] complemented by the country in which advertisements are disseminated.[428] A different connection is used for third country issuers.[429] The core connection is complemented by the Union scope of approvals of prospectuses (subject to a notification obligation).[430]

The Prospectus Regulation provides that "securities shall only be offered to the public[431] in the Union after prior publication of a prospectus"[432] that has been approved by the relevant competent authority[433] in a Member State of the EU.[434] The definition of "offer of securities to the public" is a broad one as its core component is "a communication to persons in any form and by any means".[435] Moreover, any subsequent resale of securities is considered as a separate offer.[436] Issuers from countries that are not Member States (third country issuers) need to take certain extra steps to comply with EU law before they can offer shares to the public. This makes it important to rely on exemptions.

Open terms. The substance of a securities law regime may contain several open terms the definition and interpretation of which will determine whether the regime will be applicable to the facts of the case. Open terms can in practice increase the international scope of the securities law regime.

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427 Article 20(1) and point (m)(i) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
428 Article 22(6) of Regulation 2017/1129 (Prospectus Regulation).
429 Point (m)(iii) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
430 Article 24(1) of Regulation 2017/1129 (Prospectus Regulation).
431 Point (d) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
432 Article 3(1) of Regulation 2017/1129 (Prospectus Regulation).
433 Article 20(1) of Regulation 2017/1129 (Prospectus Regulation).
434 Point (o) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
435 Point (d) of Article 2 of Regulation 2017/1129 (Prospectus Regulation): "For the purposes of this Regulation, the following definitions apply: … 'offer of securities to the public' means a communication to persons in any form and by any means, presenting sufficient information on the terms of the offer and the securities to be offered, so as to enable an investor to decide to purchase or subscribe for those securities. This definition also applies to the placing of securities through financial intermediaries; …"
436 First subparagraph of Article 5(1) of Regulation 2017/1129 (Prospectus Regulation): "Any subsequent resale of securities which were previously the subject of one or more of the types of offer of securities to the public listed in points (a) to (d) of Article 1(4) shall be considered as a separate offer and the definition set out in point (d) of Article 2 shall apply for the purpose of determining whether that resale is an offer of securities to the public. The placement of securities through financial intermediaries shall be subject to publication of a prospectus unless one of the exemptions listed in points (a) to (d) of Article 1(4) applies in relation to the final placement."

Whether the case has a sufficient connection to a certain country can depend on the definition and interpretation of when something is "offered", "offered to the public", "sold", done "in" a certain country or countries, or done in relation to investors that are "resident" in or nationals of a certain country or countries.

The use of multiple open terms can mean that the scope of the securities law regime cannot be determined reliably in advance but can only be determined after the fact. The openness of the interpretation of the scope terms of the regulatory regime can in practice increase its scope, because parties need to manage their exposure to legal risk ex ante.

To limit the international scope of a securities law regime, regulators should avoid the use of multiple open terms defining the scope of the regime.

Extraterritoriality: general remarks. It is customary to distinguish between the territorial application of securities law and its extraterritorial application.[437] In practice, however, one cannot draw a clear line between territoriality and extraterritoriality, because the connection to a territory can take many forms.

Territoriality is the main rule in international law and international private law. The EU has criticised extraterritoriality and territorial extension in US law in the past,[438] but the EU is not better in this respect. The threshold of territorial connection is rather low in EU law. The applicability of EU law has been triggered by the effects of an action within the territory of the EU. Moreover, the size of the internal market can sometimes turn unilateral EU rules into global standards.[439] This means that there is no fundamental difference between the US and the EU as far as extraterritoriality is concerned.

Countries tend to prefer the territorial extension or extraterritorial reach[440] of their securities laws. The customary argument for the wider international reach of a country's securities laws is the need to protect home-country investors.

A country may find the extraterritorial application of its own standards tempting, because the country is then able to take unilateral action with no cooperation required from a foreign country.[441] Some countries and the EU are in a

437 See, for example, Brummer C (2011) pp 500 – 501.
438 Scott J (2014) p 87.
439 Bradford A (2020).
440 Scott J (2014) p 90 defines extraterritoriality as follows: "The application of a measure triggered by something other than a territorial connection with the regulating state." She defines territorial extension as follows: "The application of a measure is triggered by a territorial connection but in applying the measure the regulator is required, as a matter of law, to take into account conduct or circumstances abroad."
441 Brummer C (2011) pp 506 – 508.

position to do so. In particular, countries with the most important securities markets may assume that their national regulatory regimes will become global standards.[442] It would be neither efficient nor meaningful for a market participant to try to ensure regulatory compliance with many conflicting standards. Market participants adapt by opting out of markets that are less important for them or by focusing on the strictest standards. This forces third-country regulators to adapt.

For example, while the EU as a rule does not openly use extraterritorial legislation, the same thing can be achieved by extended territoriality: "This technique not only leads to the EU governing transactions that are not centered upon the territory of the EU, but it also enables the EU to influence the nature and content of third country and international law."[443]

This said, it is the US that is well-known for the extraterritorial application of its laws. The US may use the extraterroritorial application of laws to promote its own economic interests thanks to its large markets, the central role of US dollars in global trade, the central role of US-based platforms in digital economy, the central role of the US in the global economy in general, and the wide authority of regulators and prosecutors over how American laws are interpreted. US authorities can target foreign companies.[444]

The extraterritorial reach of securities law may to some extent be driven by regulatory capture, industrial policy, and protectionism.[445] For example, the US places significant and costly regulatory barriers between its citizens' capital and foreign companies seeking to access it. Many of these barriers cannot be explained by investor protection.[446]

The good effects of extraterritoriality. The extraterritorial application of securities laws obviously has market effects. Some of the effects may be good.

First, extraterritoriality can create a level playing field for market participants that issue securities to the same public or trade in the same securities. It can also protect the reasonable expectations of the public in their home country.

Second, it can influence regulatory compliance. Because of operational efficiency, market participants prefer to comply with just one set of standards.

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442 Armour J, Bengtzen M, Enriques L (2018) p 402.

443 Scott J (2014) p 87.

444 The Economist, Uncle Sam's game. America's legal forays against foreign firms vex other countries, 17 January 2019.

445 See Fleckner AM, Hopt KJ (2013) pp 551–552.

446 Steil B (2002b) p 9.

A market participant that does business in many countries can choose to comply with the strictest standards even in countries that have lower standards.

Third, this mechanism can contribute to the emergence of global standards and lower transaction costs.

The bad effects of extraterritoriality. Some of the effects of the extraterritorial application of securities laws may be bad depending on the perspective.

To some extent, the extraterritorial application of a country's securities laws can increase the geographical separation of markets[447] and reduce the number of issuers, competition between issuers, competition between regulatory regimes, and choice. This is because issuers may need to avoid exposure to the regulatory regime of that country.

Generally, the extraterritorial application of the securities laws of a certain country tends to favour that country's issuers and intermediaries.

A firm obviously has the closest connection to a certain market. It tends to have larger volumes of shares traded in its home market and greater incentives to invest in regulatory compliance in its home country. Moreover, compliance is easier for home-country firms. Home-country firms have better information about the larger system that securities laws are embedded in. Home-country securities laws are embedded in the legal system of the home country, form part of a coherent system, and are aligned with home-country company law and tax law.

Compliance is more difficult and costly for foreign firms. Since foreign firms tend to have smaller volumes of shares traded in the host country, they may prefer not to invest in regulatory compliance in that country other than opting out of the regime and avoiding it completely. Moreover, the potential conflict between home-country and host-country laws can increase both exposure to legal risk and compliance costs, and make compliance less effective.

When issuers opt out of the host-country regime, retail investors in that country have less choice. Retail investors may still have a chance to invest in shares issued by foreign firms by turning to home-country or other investment funds. Retail investors' direct investment is then replaced by indirect investment.

The benefits of limiting the international scope of securities law. Limiting the international scope of securities law could increase cross-border investment opportunities and competition in national securities markets for the benefit of both retail investors and issuers for three main reasons.

First, the wide international scope of a country's regulatory regime does not necessarily benefit investors. It can hamper both the cross-border marketing of securities and cross-border investment in shares.

447 See Gadinis S, Jackson HE (2007) p 1243.

Issuers generally need to avoid exposure to sanctions for the breach of securities laws. Securities laws can be complemented by a private or public sanction enforcement regime.[448]

It is expensive for issuers to comply with multiple national regulatory regimes and sometimes impossible to comply with two or more national regulatory regimes with conflicting rules. This is likely to: give issuers incentives to limit securities offerings to a small number of countries; hamper retail investors' opportunities to diversify their direct holdings geographically; distort competition between issuers; and distort the price of securities by creating valuation differences along national borders.

Second, the wide international scope of a country's regulatory regime can force investors to turn to financial intermediaries. In the absence of foreign issuers, investors that want to diversify their holdings and invest in foreign securities may need to buy shares in investment funds that invest in foreign securities. This in effect gives financial intermediaries that operate such funds an opportunity to "tax" cross-border investments.

Third, investor protection is not necessarily improved when two advanced regulatory regimes are applied to the same facts. It is more likely to increase compliance costs without increasing protection more than marginally.

Mutual recognition. It would perhaps be unrealistic to assume that countries unilaterally would limit the extraterritorial application of their laws, but countries can at least manage problems inherent in the extraterritoriality of securities laws in two main ways. They can agree on the mutual recognition of their regulatory regimes or apply an equivalence test.

States may choose to apply these techniques where the activities fall within the national scope of securities law in two or more countries and the national requirements are complied with in one of them. These techniques matter a lot to issuers and can play a big role for retail investors as ways to increase choice and cross-border direct investment. These techniques are not applied to activities that do not fall within the regulatory regime.

Mutual recognition is the more radical of the two alternatives. The mutual recognition of regulatory regimes is the exception in international relations. It is the rule in the European internal market.[449]

In practice, countries will not agree on the mutual recognition of regulatory regimes unless they have agreed on the approximation of their regulatory re-

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448 See, for example, Bookman PK (2017) pp 615, 619, 623 and 626 on Morrison v. National Australia Bank Ltd., 561 U.S. 247 (2010), Volkswagen litigation, and Deutsche Telekom litigation.
449 See, for example, HM Government (2017) paragraph 8.11.

gimes.[450] While this is customary in the EU, it has turned out to be very difficult to agree on the approximation of regulatory regimes between the EU and the US.

The difficulties may partly have been caused by the interests of incumbent firms. Where the national regulatory regimes reflect the political power of incumbent firms and financial elites (Chapter 1), it can be more difficult to agree on their international approximation other than for the purpose of liberalising the cross-border business of financial intermediaries that already do business on both sides of the border (sections 3.3.4 and 3.3.5).

This said, there are examples of convergence. Driven by market forces,[451] the gradual convergence of the provisions of the IFRS and the US GAAP is facilitated by a "best efforts" convergence approach adopted by the IASB and FASB in a Memorandum of Understanding known as the Norwalk Agreement in 2002. Under the Norwalk Agreement, the respective boards of the two organisations shall use their best efforts to make their existing financial reporting standards fully compatible as soon as is practicable.[452] Often it seems to take a financial crisis to make governments agree on common principles and rules. This was the case with the 2009 Pittsburgh agreement of G20 leaders[453] and the Third Basel Accord (Basel III).

Equivalence. One can distinguish between mutual recognition and the equivalence test. While mutual recognition tends to be more binding for the regulatory authorities, the equivalence test can leave the regulatory authorities more discretion.

To mitigate problems relating to the international scope of securities law, the EU and the US have to some extent used an equivalence test and deemed the foreign regime as equivalent to the home regime. For example, the Sarbanes-Oxley Act generally does not distinguish between US and non-US issuers, but the Act leaves it to the SEC to determine where and how to apply the Act's provisions to foreign companies.[454] EU financial services legislation may sometimes permit

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450 See, for example, recital 2 of Directive 2014/65/EU (MiFID II).

451 See Erhardt JA (2014) on the increasing acceptance of IFRS in the US.

452 Financial Accounting Standards Board and International Accounting Standards Board, Memorandum of Understanding, "The Norwalk Agreement", 18 September 2002. See Nicolaisen DT (2005) p 672, citing two press releases: Securities and Exchange Commission, Actions by FASB, IASB Praised (Oct. 29, 2002) (Press Release No. 2002–154); European Commission, Financial Reporting: Commission Welcomes IASB/FASB Convergence Agreement (29 October 2002) (Press Release Reference IP/02/1576).

453 See recital 5 of Regulation 648/2012 (EMIR).

454 See, for example, Mäntysaari P (2005) section 3.2.3.

equivalence regimes for third countries.[455] These regimes may be discretionarily activated or revoked by the European Commission.[456] In the EU, the concept of equivalence was first introduced in the Second Banking Directive.[457] Equivalence is now primarily used to recognise third country regimes for prudential purposes. In a limited number of cases, it may also provide third country firms with access to the internal market.[458] Since equivalence is rarely applied, it is perhaps not surprising that the British government did not aim for the equivalence of regulatory regimes for financial markets in its Brexit White Paper.[459] Neither did the City, because it would not be reasonable to build long-term business on something that can be unilaterally granted by the EU in many separate areas and withdrawn on short notice.[460]

There is an agreement between the European Commission and the US Commodity Futures Trading Commission (CFTC) on a common approach regarding certain derivatives trading platforms. The agreement enables some EU platforms to offer trading services to US counterparties, and the European Commission has recognised some US trading venues authorised by the CFTC as eligible for compliance with the EU trading obligation for derivatives.[461] In the EU, the decision took the form of an implementing act.[462]

Excursion: The Prospectus Directive of 2003 and the Prospetus Regulation of 2017. In the EU, legislative acts on prospectuses both designate the governing law and lay down the substantive provisions. The Prospectus Directive of 2003 that was implemented by the Member States was based on the principles of a single passport and the issuers' home country control.[463] It provided for a duty

455 Pennesi F (2020) p 3: "Among the over 40 different legislative measures comprising the EU rulebook for financial services, only 17 allow foreign market actors to access the Single Market, provided an equivalence decision is taken by the European Commission."

456 Deslandes J, Magnus M (2018); Pennesi F (2020).

457 Article 16 of Directive 89/646/EEC replacing Article 12 of Directive 77/780/EEC.

458 Deslandes J, Magnus M (2018); Pennesi F (2020) p 3.

459 HM Government (2017) paragraphs 8.24 and 8.26. See also Preparing for the withdrawal of the United Kingdom from the European Union on 30 March 2019. Communication from the Commission, COM(2018) 556 final.

460 IRSG (2017); Helen Thomas, Forget equivalence, the City of London needs a post-Brexit plan. Financial Times, 7 April 2021.

461 EU and CFTC: Mutual Recognition of Derivatives Trading Venues. The joint statement of the European Commission and the CFTC dated 17 December 2017.

462 Commission Implementing Decision (EU) 2017/2238 of 5 December 2017 on the equivalence of the legal and supervisory framework applicable to designated contract markets and swap execution facilities in the United States of America in accordance with Regulation (EU) No 600/2014 of the European Parliament and of the Council.

463 Recital 1 of Directive 2003/71/EC (Prospectus Directive).

to publish a prospectus[464] approved by the competent authority of the issuer's home Member State.[465] This prospectus was valid in the other Member States as well.[466] There were language requirements.[467] For third-country issuers that wanted to use a prospectus drawn up in accordance with the legislation of a third country, there was an equivalency test.[468] Generally, all issuers could benefit from exemptions for offers to qualified investors and for offers with a minimum consideration of €100,000 per investor or a minimum denomination of €100,000. Any subsequent resale of such exempted securities was regarded as a separate offer.[469]

The Prospectus Directive of 2003 was replaced by the Prospectus Regulation of 2017. The Prospectus Regulation is directly applicable law in the Member States and a "step towards the completion of the Capital Markets Union" (see section 4.4).[470] The Prospectus Regulation "lays down requirements for the drawing up, approval and distribution of the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market situated or operating within a Member State."[471] According the Regulation, "securities shall only be offered to the public in the Union after prior publication of a prospectus"[472] that has been approved by the relevant competent authority.[473] The Regulation addresses the question of language in many of its provisions. Moreover, it addresses the question of equivalence: "In order to ensure uniform conditions for the implementation of this Regulation in respect of equivalence of the prospectus laws of third countries, implementing powers should be conferred on the Commission to take a decision on such equivalence. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council."[474]

Towards a transatlantic securities market with mutual recognition? To some extent, international securities markets are already aligned. First, major stock indices tend to move in the same direction. Second, cross-border trading is made possible by the availability of investment funds for indirect investments, regis-

464 Article 3(1) of Directive 2003/71/EC (Prospectus Directive).
465 Article 13(1) of Directive 2003/71/EC (Prospectus Directive).
466 Article 17(1) of Directive 2003/71/EC (Prospectus Directive).
467 Article 19 of Directive 2003/71/EC (Prospectus Directive).
468 Article 20(1) of Directive 2003/71/EC (Prospectus Directive).
469 Article 3(2) of Directive 2003/71/EC (Prospectus Directive).
470 Recital 1 of Regulation 2017/1129 (Prospectus Regulation).
471 Article 1(1) of Regulation 2017/1129 (Prospectus Regulation).
472 Article 3(1) of Regulation 2017/1129 (Prospectus Regulation).
473 Article 20(1) of Regulation 2017/1129 (Prospectus Regulation).
474 Recital 79 of Regulation 2017/1129 (Prospectus Regulation).

tered brokers and authorised investment firms for direct investments, and lower fees. Third, foreigners own about 25% of American shares with the US stock market the biggest market by market capitalisation.[475]

The flow of equity investments nevertheless raises questions from a European perspective. US holdings of foreign securities have been consistently lower than foreign holdings of US securities, resulting in a negative net portfolio investment position. On one hand, this may reflect the chronic trade deficit of the US. Because of the trade deficit, foreigners will end up owning US dollar denominated assets.[476] On the other, the flow of equity investments might even reflect constraints on the issuing of foreign securities to US investors and constraints on trading in foreign securities.[477] In any case, the US net position has been on a mostly declining trajectory. Moreover, the top position of European countries has been occupied by the UK with Ireland, France, Switzerland, the Netherlands, and Germany much behind.[478] The list indicates that US investors' holdings were heavily concentrated in the financial sector.[479]

In 2002, Benn Steil proposed the building of a transatlantic securities market for the EU and the US. The proposal was based on the mutual recognition of exchanges.[480] It was inspired by the success of mutual recognition and home country control in the EU.[481] Moreover, it was based on the recognition of the fact that, despite their differences, both regulatory regimes are designed to sufficiently protect investors.[482]

If agreed between the EU and the US, the mutual recognition of exchanges and the regulatory frameworks that govern them could be a way to exempt EU-listed companies from US securities law and vice versa. A mutual recognition regime would thus be more than just an attempt to make cross-listings cheaper as it would make it less necessary for European companies to cross-list and use costly ADRs (section 6.4.9).[483] Steil also argued that this is the difference, first,

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475 The Economist, Over the great wall, 20 March 2021.

476 Congressional Research Service, The Dollar and the U.S. Trade Deficit, December 9, 2020.

477 For exemptions, see SEC Release No. 33–9415; No. 34–69959 (September 23, 2013) (Eliminating the Prohibition Against General Solicitation and General Advertising in Rule 506 and Rule 144A Offerings).

478 Department of the Treasury, Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System, U.S. Portfolio Holdings of Foreign Securities As of End-December 2019 (October 2020) pp 7 and 12.

479 *Ibid.*, p 30.

480 Steil B (2002b) p 9.

481 *Ibid.*, p 17.

482 *Ibid.*, p 11.

483 *Ibid.*, p 10.

between the mutual recognition of exchanges and the mutual recognition of issuers or disclosures proposed by Roberta Romano (who also proposed the right of issuers to choose the regulatory regime)[484] and, second, between the mutual recognition of exchanges and the mutual recognition on a piece-meal basis of requirements applicable to issuers.[485]

However, Steil pointed out that trade negotiators generally tend to focus on domestic producer interests (in this case the interests of exchanges) rather than consumer interests (in this case the interests of investors and listed companies).[486]

Conclusion. The international scope of securities law can increase or reduce choice for retail investors and the funding alternatives of firms.

The extraterritorial effect of a country's securities law regime can hamper foreign direct investment by that country's retail investors since foreign companies may prefer to avoid exposure to that regulatory regime. Extraterritorial effect can reduce choice, increase the price of securities available to retail investors, and force retail investors to turn to financial intermediaries for indirect investment in the securities of foreign issuers. Moreover, the extraterritorial effect of a country's securities law regime can hamper incoming foreign direct investment in other countries and the funding alternatives of foreign firms.

When balancing the respective scopes of different securities law regimes, the wide scope of the regulatory regime of the issuer's country of incorporation or listing (complemented by the narrow scope of the regulatory regime of retail investors' home country) would make it easier for companies to issue shares in many countries.

The narrow scope of the regulatory regime of retail investors' home country might mean less protection for retail investors under that regime, but could foster the interests of retail investors as a class by increasing choice for retail investors.

The downside of the wide scope of the regulatory regime of the issuer's country of incorporation or listing is the risk of a race to the bottom, that is, issuers moving to countries with few residents but lax securities laws.

Where the governing law is the law of retail investors' home country, the conditional recognition of third-country standards or an equivalence test would help to address a race to the bottom.

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484 Romano R (2001); Steil B (2002b) pp 15–16.

485 Steil B (2002b) p 11.

486 *Ibid.*, p 16.

6.4.7 Facilitate Retail Investors' Cross-Border Direct Investments

Retail investors have more investment opportunities in a larger geographical area if they can invest in shares issued by foreign companies.[487] The two main reasons why individual investors choose international investments and investments with international exposure are diversification and growth prospects.[488]

According to the SEC, there are a number of ways for individual US investors to gain exposure to international investments: US-registered mutual funds (such as global funds, international funds, regional or country funds, or international index funds); US-registered exchange-traded funds (ETFs); American depositary receipts; US-traded foreign stocks; and trading in foreign markets.[489] The situation is similar in the EU.

Generally, US retail investors may turn to US-registered mutual funds or US-registered ETFs when it is difficult for them to make direct investments or diversify investments. In the EU, investment funds are "by far the most widely-available product category" offered by distributors to retail investors online.[490]

To increase retail investors' direct investments, the number of foreign stocks traded in the retail investor's home country should be increased and trading in foreign markets made easier for retail investors.

There are constraints on retail investors' direct cross-border investments. Investments are hampered by laws.[491] In particular, the execution and formalities of cross-border investments may be too costly and complicated for retail investors, and there can be tax issues.[492]

In the US, the Office of Investor Education and Advocacy has warned investors who want to invest internationally of several problems such as different ac-

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487 See Blume ME (2000) pp 3–4.

488 Simons K (1999); SEC (2016a).

489 For definitions, see SEC (2016a).

490 European Commission (2018) p 17.

491 See also European IPO Task Force (2015) pp 53–54, Aim 2.1: "Create a single market for retail investors to directly access public equity markets cross-border in Europe (in addition to investment with financial intermediation)". Recommendation 2.1.2: "Lower the costs of execution-markets cross-border in Europe (in addition to investment with financial only investment accounts by removing barriers to the development of platforms providing direct access to retail investors, such as cross-border brokerages or exchanges". Aim 2.2: "Ensure that EU legislation does not restrict investors' ability to invest". Recommendation 2.2.1: "Create a separate new impact assessment, which considers the cumulative effect of all EU financial regulation 2009–2014 for its impact on investors".

492 *Ibid.*, pp 57–58, Recommendation 5: "Improve tax incentives for investment into IPOs and equity more generally". Aim 5.4: "Ensure tax system is not a barrier to cross-border savings".

cess to information, higher costs, working with brokers that may not be registered in the US, currency-related risks, different market operations generally, and access to legal remedies.[493]

When direct cross-border investments are hampered, retail investors will invest more of their savings in their home country. Retail investors generally display home bias[494] and might even prefer local bank deposits.[495] When retail investors prefer investments in their home country, stock markets are more likely to remain fragmented across national borders, be less attractive to SMEs and mid-caps, and be smaller in size.[496] Retail investors that prefer to diversify their investments in a larger geographical area will invest indirectly by turning to financial intermediaries. This influences both market concentration and volatility. When cross-border direct investment is channelled through large institutional investors, capital flows are more correlated and volatility is increased.[497]

This does not have to be.[498] Moving funds across time and space belongs to the traditional functions of financial instruments and innovations.[499] Technological advancement and the emergence of low-cost retail brokerage platforms have already made it easier to invest in foreign securities.

Countries can do several things. They can generally try to reduce costs, they can limit the international scope of their own regulatory framework, they can permit that home-country brokerages provide access to foreign exchanges, they can permit retail investors to use foreign brokerages, they can permit trading in a foreign company's shares without a duty to publish a prospectus or a registration duty, and they can change tax laws. We can have a brief look at these ways to increase retail investors' direct cross-border investment.

Reduce costs. Costs can be too high. In the US, the Office of Investor Education and Advocacy has described the high costs of international investing as follows: "In some countries there may be unexpected taxes, such as withholding taxes on dividends. In addition, transaction costs such as fees, broker's commissions and taxes may be higher than in U.S. markets. Investors also should be

493 SEC (2016a).
494 See paragraph 68 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995–Deutsche Börse / London Stock Exchange); Armour J, Bengtzen M, Enriques L (2018) pp 396–398.
495 See, for example, recital 1 of Regulation 2019/1238 (PEPP).
496 OECD (2015c) p 132.
497 Ben-David I, Franzoni FA, Moussawi R, Sedunov J (2020).
498 See, for example, the vision of Blume ME (2000) pp 3–4.
499 See Lerner J, Tufano P (2012) on financial innovation.

aware of the potential risks and effects of currency conversion costs on an investment. U.S.-registered mutual funds and ETFs that invest abroad may have higher fees and expenses than funds and ETFs that invest in U.S. securities, in part because of the extra expense of trading in foreign markets."[500]

In direct cross-border equity investments, the execution of trades can be costly where two brokers are involved in the transaction, namely a local broker and a broker in a foreign country both charging a commission. Where the transaction involves two currencies, costs are increased by the spread, and the holding of securities traded in a foreign currency will mean exposure to currency risk. Where the investment leads to tax obligations in two countries, the investor needs to manage tax issues in both countries and may face double taxation. Where dual-listed stocks can be traded on different trading venues, trading on the less liquid venue can increase costs. Generally, the trading venue of a dual-listed issuer's home country tends to be more liquid because of larger trading volumes.

Many retail investors nevertheless prefer direct cross-border investments. The GameStop case indicates that some retail investors that make short-term investments in foreign-traded stocks do not rely on traditional disclosures and forms of home-country investor protection (section 5.6). For them, the lack of traditional disclosures and home-country protection does not increase costs. Fleckner and Hopt have earlier pointed out that "the whole debate on market access for foreign exchanges is influenced less by regulatory rather than by political reasons, especially as no cases have come to the fore where investor protection was at risk only because investors traded through foreign exchanges."[501] For these investors, the costs to be reduced seem to be invoiced costs and taxes. Countries can influence at least taxes.

Limit the international scope of the regulatory framework. The general objectives of the securities law regime play a role in hampering retail investors' direct cross-border investment. On one hand, retail investors tend to be protected by their home country's securities law. On the other, the same legal regime can make it more difficult for retail investors to invest in foreign securities.

This is particularly the case where their home country's securities law regime has a large international scope (section 6.4.5) and lays down broker or issuer duties that are hard or costly to comply with. To manage such duties and the cost of compliance, foreign brokerages and issuers may decide to avoid the regime.

500 *Ibid.*

501 Fleckner AM, Hopt KJ (2013) pp 551–552.

One might argue that it is easier for retail investors to invest in foreign securities if the securities and the activities of foreign middlemen fall within the scope of the securities law regime of the retail investors' home country. However, retail investors may not be able to invest in foreign securities in the first place unless issuers and middlemen make it happen. They may opt out of a foreign market because of the high cost of regulatory compliance. Therefore, the scope of the securities law regime of retail investors' home country should be limited to increase retail investors' direct cross-border investment. We can have a look at some ways to balance different regulatory aims under existing law and focus on how brokerages are permitted to provide access to foreign exchanges and whether traders are permitted to use foreign brokerages.

Permit brokerages to provide access to foreign exchanges. The business of brokers is regulated both in the US and the EU.

In the US, brokers must register with the SEC and a SRO under Section 15 of the Securities Exchange Act of 1934. A US investor needs a broker to trade on US or foreign markets. The US takes a strict approach in relation to US investors' ability to access foreign exchanges directly: "Foreign exchanges may not provide for the dissemination of quotes in the U.S. without registering with the SEC as an exchange. The practical effect of this is that U.S. investors cannot get direct access to foreign exchanges."[502]

In the EU, providers of investment services must obtain an authorisation as investment firms under Article 5 of MiFID II. For example, the "execution of orders on behalf of clients" is an investment service.[503] Investment services may relate to all kinds of transferable securities and various other products.[504]

While both the Securities Exchange Act and MiFID II regulate the business of brokers, they do not prohibit the registered broker or authorised investment firm from providing access to trading on a foreign exchange. A US broker or a European investment firm may thus be able to process an order for a company that only trades on a foreign securities market.

The trader is protected by duties owed by the broker or investment firm to customers. In the US, a broker-dealer is not uniformly considered a fiduciary to its customers but may owe customers a fiduciary duty under some circumstances. Broker-dealer conduct is subject to comprehensive regulation under the Se-

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502 Armour J, Bengtzen M, Enriques L (2018) p 460. See also *ibid*., p 462: "In a framework where retail investors have indirect access to capital markets via institutional investors, it is less important to allow retail investors direct access to the services of foreign broker-dealers and/or to foreign trading venues (via domestic or foreign brokers)."

503 Section A of Annex I to Directive 2014/65/EU (MiFID II).

504 Section C of Annex I to Directive 2014/65/EU (MiFID II).

curities Exchange Act and the rules of each SRO to which the broker-dealer belongs.[505] In the EU, the duties that investment firms owe to customers are largely based on MiFID II.[506] The duties of investment firms in their dealings with clients make it easier to trade in various kinds of financial instruments.[507] There is an exemption from some obligations for execution-only services relating to shares admitted to trading on a trading venue in the EU or an "equivalent" third-country market.[508]

Permit the use of foreign brokerages. The use of foreign brokerages is subject to more restrictions as there is a registration or authorisation requirement for brokers or investment firms. Whether this reduces retail investors' direct investment is doubtful in the light of the fact that registered or authorised brokerages can provide access to foreign exchanges. Moreover, foreign brokerages may to some extent effect unsolicited transactions.

In the US, the main rule is that a foreign or US broker must not contact a US investor and solicit an investment unless the broker is registered with the SEC.[509] Broker-dealers located outside the US that conduct securities transactions with persons in the US are thus required to register with the SEC.

However, there are exemptions from registration. If an exemption applies, US investors may directly contact and work with a foreign broker not registered with the SEC. Rule 15a-6 under the Exchange Act provides a conditional exemption from broker-dealer registration for a non-US broker-dealer falling under the definition of "foreign broker or dealer" that engages in certain activities involving certain US investors. For example, a non-US broker-dealer may engage in effecting unsolicited transactions or in effecting solicited transactions with US institutional investors with the assistance of a US-registered broker-dealer intermediary. The staff of the SEC has released FAQs reflecting the SEC's broad interpretation of Rule 15a-6.[510] In the context of broker-dealer registration, the SEC takes a broad view of what constitutes solicitation. Solicitation includes efforts to induce a single transaction or to develop an ongoing securities business relationship.[511]

505 See SEC Release No. 34 – 69013 (March 1, 2013) (Duties of Brokers, Dealers and Investment Advisers), I.A.

506 See Articles 24 – 30 of Directive 2014/65/EU (MiFID II).

507 Articles 23 – 30 of Directive 2014/65/EU (MiFID II).

508 Article 25(4) of Directive 2014/65/EU (MiFID II).

509 Section 15 of the Securities Exchange Act of 1934; Section 5 of the Securities Act of 1933.

510 Staff of the Division of Trading and Markets of the SEC (2013); Sacks RD (2013).

511 Staff of the Division of Trading and Markets of the SEC (2013); Exchange Act Release No. 27017 (July 11, 1989), 54 FR 30013 (July 18, 1989) (Rule 15a-6 Adopting Release).

Investment advisers advising US persons on investments in securities must register in the US unless they are eligible for an exemption.[512]

In the EU, MiFID II applies to the provision and/or performance of investment activities and ancillary services within the territories of Member States.[513] An investment firm needs a MiFID II authorisation that is available to firms established in a Member State. The provision of services by third-country firms in the Union is subject to national regimes and requirements. Firms authorised in accordance with national regimes do not enjoy the freedom to provide services and the right of establishment in Member States other than the one where they are established.[514] According to MiFID II, a Member State may nevertheless require that a third-country firm establish a branch.[515] A third-country firm may benefit from an equivalence decision when providing investment services to sophisticated investors ("eligible counterparties and professional clients").[516] The main rule nevertheless is that a third-country firm is not permitted to provide services without establishing a branch and obtaining an authorisation.[517]

Like in the US, there is an exemption when a client "initiates at its own exclusive initiative the provision of an investment service or activity by a third-country firm". In that case, the requirement for authorisation does not apply.[518] Third-country firms may thus effect unsolicited transactions: "The provision of this Directive regulating the provision of investment services or activities by third-country firms in the Union should not affect the possibility for persons established in the Union to receive investment services by a third country firm at their own exclusive initiative. Where a third-country firm provides services at the own exclusive initiative of a person established in the Union, the services should not be deemed as provided in the territory of the Union. Where a third-country firm solicits clients or potential clients in the Union or promotes or advertises investment services or activities together with ancillary services in the Union, it should not be deemed as a service provided at the own exclusive initiative of the client."[519]

Make companies and exchanges international in the home country of the retail investor. Retail investors' cross-border investment opportunities can to some ex-

512 SEC (2016a).
513 Article 34–36 of Directive 2014/65/EU (MiFID II).
514 Recital 109 of Directive 2014/65/EU (MiFID II).
515 Article 39 of Directive 2014/65/EU (MiFID II).
516 Articles 46–47 of Regulation (EU) 600/2014 (MiFIR).
517 Articles 1(1) and 39 of Directive 2014/65/EU (MiFID II).
518 Article 42 of Directive 2014/65/EU (MiFID II).
519 Recital 111 of Directive 2014/65/EU (MiFID II).

tent be increased by making companies and exchanges international in the retail investors' home country.

Retail investors' cross-border investment opportunities depend on where the issuer is incorporated (the issuer can be a domestic company or a foreign company) and where the shares are publicly traded (the shares can be traded on an exchange in the retail investors' home country or in a foreign country).

To some extent, retail investors can diversify their holdings and benefit from global markets even when they invest locally. The shares of a company incorporated in the retail investors' home country can present cross-border investment opportunities where the company does business abroad or the company's shares are traded in a foreign country.[520] If states make it easier for local firms to participate in international trade, states can help retail investors to diversify their holdings and benefit from global markets. Investing in local companies is a way to reduce the costs of execution and avoid the risk of double taxation.

Where the shares of a foreign company are traded publicly in the retail investors' home country, trading is easier for them. Cross-listings (section 6.4.8) may help. However, the shares will not be traded on a venue in that country, unless they are admitted to trading and the foreign company accepts to comply with listing rules and ongoing issuer obligations under that country's laws. In that case, the cross-border investment opportunities of retail investors and the number of foreign companies with publicly-traded shares can be increased by reducing the cost of regulatory compliance in the retail investors' home country.[521] Relative costs can be reduced by raising standards in the issuer's home country.[522] However, there can be a risk of double taxation and increased tax compliance obligations for retail investors investing in the shares of a foreign company.

Retail investors can benefit from stock exchange mergers that result in bigger exchanges admitting more securities to trading with issuers from a larger geographical area. This might reduce execution costs. For example, it is relatively easy for American retail investors to trade in the stocks of the many companies admitted to trading on the NYSE or Nasdaq that are large exchanges. Stocks admitted to trading on the NYSE or Nasdaq can be traded on those or other trading

520 See, for example, Rule 405 of Regulation C on the definition of foreign private issuers under the Securities Act of 1933.

521 See, for example, Morrison & Foerster LLP (2017) on foreign private issuers in the US.

522 Fernandes N, Giannetti M (2013): "Thus one may argue that improvements in corporate governance around the world have strengthened the competitive advantage of U.S. and U.K. exchanges, where regulations and market forces guarantee particularly strong protection of investor rights."

venues in the US.[523] Moreover, the fact that Nasdaq operates many stock exchanges in the Nordic area makes it easier for Nordic retail investors to find information about and trade in shares listed on any Nordic exchange.

This said, retail investors can also benefit from the emergence of multiple new trading venues that provide trading as a low-cost commodity regardless of where the stocks have been admitted to trading (section 3.2.6).

Reduce regulatory compliance obligations for foreign issuers through the balancing of policy goals. Retail investors will have fewer opportunities if issuers choose to avoid issuings or secondary trading in the retail investors' home country in order to reduce the cost of regulatory compliance. Addressing this problem requires the weighing and balancing of different policy goals that even relate to the international scope of securities law. The US and the EU have addressed this question in different ways due to the fact that the US is a federal state and the EU is not.

The problem that investors will not be able to invest in foreign securities if issuers and middlemen prefer not to offer foreign securities to them in the first place is generally recognised in the US. In addition to the treatment of foreign brokerages effecting unsolicited transactions, there are particular rules on foreign private issuers.

In the US, the starting point is that there is federal securities law applying to issuers in each state. US issuers are domestic and not foreign. The regulatory compliance obligations of domestic issuers and the right to invest in the securities of domestic issuers are taken for granted subject to exemptions such as those applying to small issuers or issuings to big investors (section 6.4.4).

The SEC has addressed the regulation of foreign private issuers by weighing and balancing two competing policies: First, "the investing public in the United States needs the same type of basic information disclosed for an investment decision regardless of whether the issuer is foreign or domestic". Second, "the interests of the public are [also] served by an opportunity to invest in a variety of securities, including foreign securities". This rule of thumb can be found in an often quoted SEC release from 1981.[524]

On one hand, these two policies led to the principle of neutrality. The SEC argued for neutrality in its 1981 release as follows: "The legislative history of

523 For the NYSE and Nasdaq, this can create the problem of free-riding. Macey JR, O'Hara M (2005) p 576.

524 SEC Release Nos. 33 – 6360, 34 – 18274, 39 – 677 (Nov. 20, 1981) [46 FR 58511] (Integrated Disclosure System for Foreign Private Issuers). See Saunders M (1993) pp 59 – 60; Nicolaisen DT (2005) pp 668 – 670; Erhardt JA (2014).

the Securities Act indicates an intent to treat foreign private issuers (as distinct from foreign governments) the same as domestic issuers. Therefore, the Commission has generally perceived its function as neither discriminating against nor encouraging foreign investment in the United States or investments in foreign securities. The Commission's rulemaking authority in this area is conditioned upon findings that the relevant rule or form is necessary for the protection of investors and in the public interest."[525]

On the other, mere neutrality is not enough to give the public an opportunity to invest in foreign securities. If all foreign issuers were required to comply with the same requirements as domestic issuers, foreign issuers might not enter US capital markets and US investors would be deprived of the opportunity to broaden their investment targets.[526] The principle of neutrality is therefore complemented by the principle of voluntarism. The SEC expressed it in its 1981 release as follows:

"[The] Commission must evaluate two competing policies. One is the recognition that the investing public in the United States needs the same type of basic information disclosed for an investment decision regardless of whether the issuer is foreign or domestic. This view suggests that foreign registrants be subject to exactly the same requirements as domestic ones. The other is that the interests of the public are served by an opportunity to invest in a variety of securities, including foreign securities. An implication of this policy is that the imposition on foreign issuers of the same disclosure standards applicable to domestic issuers could discourage offerings of foreign securities in the United States, thereby depriving United States investors of the opportunity to invest in foreign securities. According to this reasoning, the public interest would be best served by encouraging foreign issuers to register their securities with the Commission.

The Commission has never formally adopted or endorsed either of these approaches. Instead, the Commission regularly has sought to balance the competing policy interests underlying each interpretation using a principle of voluntarism. According to that principle, the more voluntary steps a foreign company has taken to enter the United States capital markets, the degree of regulation and amount of disclosure more closely approaches the degree of regulation of domestic registrants."[527]

525 Integrated Disclosure System for Foreign Private Issuers, at 58513; Nicolaisen DT (2005) pp 668–669; Saunders M (1993) p 59.

526 Saunders M (1993) p 60.

527 Integrated Disclosure System for Foreign Private Issuers, at 58513; Nicolaisen DT (2005) p 669; Saunders M (1993) pp 60–61.

The principle of voluntarism that the SEC according to its 1981 release regularly has used is rather open and has few defined parameters.[528]

This approach resembles the SEC's approach to "solicitation" by broker-dealers. In adopting Rule 15a-6, the SEC explained that because of the "expansive, fact-specific, and variable nature" of the concept of solicitation, it believes that "the question of solicitation is best addressed by the staff on a case-by-case basis, consistent with the principles elucidated in the [Rule 15a – 6 Adopting Release]". The SEC generally considers solicitation "as including any affirmative effort by a broker or dealer intended to induce transactional business for the broker-dealer or its affiliates."[529]

In any case, the SEC needs to balance competing policies. To encourage foreign issuers to choose the US regulatory framework and increase filings with the SEC, the SEC needs to take into account the different circumstances of foreign registrants. The SEC described this in its 1981 release as follows:

"The few areas in which differences in the disclosure requirements exist are those in which the domestic disclosure requirements could be a significant impediment to foreign issuers registering their securities. The Commission is aware that United States investors, if they are so inclined, can invest in foreign securities directly in foreign markets. Therefore, discouraging registration may not be in the public interest because the disclosure in the foreign market may be less than that required in filings with the Commission even with the proposed accommodations."[530]

"The Commission desires to administer the Federal Securities laws in a manner that does not unfairly discriminate against or favor foreign issuers. Thus, the Commission is attempting to design a system that parallels the system for domestic issuers but also takes into account the different circumstances of foreign registrants. In proposing this [filing] system the Commission has attempted to balance certain competing policies."[531]

In the EU, both issuers and investors can benefit from the free movement of capital when an issuer is established in a Member State and its shares have been admitted to trading in any Member State, or when the shares of a third-country

528 Saunders M (1993) p 60.
529 Staff of the Division of Trading and Markets of the SEC (2013); Exchange Act Release No. 27017 (July 11, 1989), 54 FR 30013 (July 18, 1989) (Rule 15a-6 Adopting Release).
530 Integrated Disclosure System for Foreign Private Issuers, at 58519; Nicolaisen DT (2005) p 669.
531 Integrated Disclosure System for Foreign Private Issuers, at 58513; Nicolaisen DT (2005) p 670.

issuer have been admitted to trading in a Member State.[532] Moreover, dual listings are made easier by simplified rules on secondary issuances[533] and the chance to regard prospectuses drawn up in accordance with third-country laws as equivalent under some circumstances.[534] In the case of dual listings, MiFIR lays down a Share Trading Obligation (STO) for investment firms. The STO means that EU investment firms must trade dual-listed shares on venues recognised by the EU.[535]

EU securities law does not prevent investors from trading on exchanges abroad. Third-country issuers are not subject to a registration obligation on the basis of the mere number of shareholders or trading within the territory of the EU. Neither is the duty to publish a prospectus triggered by mere share ownership. The duty to publish a prospectus only applies where "securities are *offered* to the public or *admitted* to trading on a regulated market situated or operating within a Member State".[536] The scope of the Market Abuse Regulation reflects the scope of the Prospectus Regulation in this respect.[537] This limits foreign issuers' exposure to compliance obligations in the EU and makes it easier for EU retail investors to invest in third-country securities such as the stocks of foreign big tech companies.

PEPP. In the EU, the PEPP Regulation[538] created the pan-European personal pension product (PEPP). The PEPP is a voluntary personal pension scheme that will complement existing public and occupational pension systems, as well as national private pension schemes. It was created to channel more savings to long-term investments in the EU. PEPP providers will be able to sell the product anywhere in the EU with one single registration.

The PEPP Regulation provides for a "portability service": "PEPP savers shall have the right to use a portability service which gives them the right to continue contributing into their existing PEPP account, when changing their residence to another Member State."[539] At the same time, the PEPP is intended to give EU citizens more choice when saving up money for retirement.[540]

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532 Points (x) and (m)(iii) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
533 Article 14 of Regulation 2017/1129 (Prospectus Regulation).
534 Article 29 of Regulation 2017/1129 (Prospectus Regulation).
535 Article 23 of Regulation (EU) 600/2014 (MiFIR); European Securities and Markets Authority (2020) paragraph 205.
536 Article 1(1) of Regulation 2017/1129 (Prospectus Regulation).
537 Article 2(1) of Regulation (EU) No 596/2014 (MAR).
538 Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 on a pan-European Personal Pension Product (PEPP).
539 Article 17(1) of Regulation 2019/1238 (PEPP).

In the future, PEPP solutions could be developed into a legal tool that increases retail investors' foreign direct investment. This was pointed out by FESE: "Had the PEPP offered retail savers with the option to make direct investments in shares and bonds, it would have resulted in an increase in the funding options for firms, i.e. retail investors could have had the choice on what they invest in … Therefore, policy makers should look at this product again and try to ensure it will be used as a further choice for investors to invest pan-European."[541]

Free movement of capital and the CMU action plan in the EU. In the EU, facilitating retail investors' cross-border direct investments has a connection to the free movement of capital in addition to freedom of establishment and the freedom to provide services. The free movement of capital is the most recent of all Treaty freedoms. The European Commission has recognised that this freedom has not resulted in an integrated capital market: "Despite the progress achieved in liberalising capital flows in the EU, capital markets have remained, to a large extent, fragmented."[542] To address this problem and to create an integrated single market for capital, the Commission launched its Capital Markets Union (CMU) action plan in September 2015.

The fact that the European regulatory regime has not delivered an integrated capital market may have a connection to the failure of the earlier regulatory regime to facilitate retail investors' direct investments. We can have a brief look at the development of the regulatory regime for the free movement of capital and the CMU action plan.

The Treaty of Rome required restrictions on the movement of capital to be removed only to the extent necessary for the functioning of the common market. The road to the free movement of capital started with the duty to grant foreign exchange authorisations under the First Capital Directive of 1960.[543] A Council Directive of 1988 scrapped all remaining restrictions on capital movements between Member States' residents.[544] All restrictions on capital movements and payments have been removed since the Maastricht Treaty that entered into

540 Recital 10 of Regulation 2019/1238 (PEPP).
541 FESE (2019) p 25.
542 The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final.
543 EEC Council: First Directive for the implementation of Article 67 of the Treaty, OJ 43, 12.7.1960, p. 921.
544 Council Directive 88/361/EEC of 24 June 1988 for the implementation of Article 67 of the Treaty, OJ L 178, 8.7.1988, p. 5.

force in 1994. The free movement of capital and payments is now based on the Treaty on the Functioning of the European Union (TFEU).[545]

While the objective is to achieve "free movement of capital between Member States and third countries to the greatest extent possible",[546] the free movement of capital is not unlimited under the TFEU.[547] The free movement of capital is: (1) "without prejudice to the other Chapters of the Treaties";[548] and (2) "without prejudice to the right of Member States: (a) to apply the relevant provisions of their tax law which distinguish between taxpayers who are not in the same situation with regard to their place of residence or with regard to the place where their capital is invested; (b) to take all requisite measures to prevent infringements of national law and regulations, in particular in the field of taxation and the prudential supervision of financial institutions, or to lay down procedures for the declaration of capital movements for purposes of administrative or statistical information, or to take measures which are justified on grounds of public policy or public security";[549] as well as (3) "without prejudice to the applicability of restrictions on the right of establishment which are compatible with the Treaties".[550]

In effect, Treaty provisions on the free movement of capital are not designed to abolish market structures that allocate investment business to financial intermediaries and hamper retail investors' opportunities to make direct investments in foreign securities. Moreover, these Treaty provisions do not address the existence of cross-border taxation issues that increase costs for retail investors. Improving retail investors' opportunities to invest in foreign issuers' securities directly does not seem to be on the European Commision's radar yet.[551]

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545 Article 63 of the TFEU.
546 Article 64(2) of the TFEU.
547 Articles 64–66 of the TFEU.
548 Article 64(2) of the TFEU.
549 Article 65(1) of the TFEU.
550 Article 65(2) of the TFEU.
551 The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final, section 1.2.1: "Capital markets have expanded substantially since 1992 to more than twice the size of the Union economy in 2015. More and more financial service providers are able to offer their services across the Union thanks to a single passport. This stimulates competition and offers new opportunities for businesses which need funding on capital markets. They can now finance more of their activities across the Single Market and are less dependent on bank financing. Reinforced supervision at Union level has led to higher levels of consumer and investor protection."

In any case, the European Commission has recognised the problem. According to the Commission's CMU action plan, "there are still many long-standing and deep-rooted obstacles that stand in the way of cross-border investments".[552]

The Commission identified some of the obstacles in its CMU action plan: "These range from obstacles that have their origins in national law – insolvency, collateral and securities law – to obstacles in terms of market infrastructure, tax barriers and changes in the regulatory environment that undermine the predictability of rules for direct investments."[553] The Commission wants to remove at least some of the barriers to geographical diversification of portfolios.

However, the CMU action plan is rather light on such measures. The Commission mentions: questions relating to divergent national property and insolvency laws; questions relating to ownership of securities, choice of law, use of securities as collateral, and legal certainty in general; and barriers to efficient cross-border clearing and settlement.[554]

Tax issues. Retail investors will not choose direct cross-border equity investments where the costs are too high. The costs may relate to execution and taxation. Taxation influences investor behaviour.

There are divergent taxation rules in each country. Since taxation rules are not within the EU authority, there can be double taxation of dividends in the EU.[555] Generally, when dividends are paid by a company resident in one country to an investor resident in another country, the investor may have to pay income tax or withholding tax in the country in which dividends are paid and income tax in the investor's country of residence.[556] Addressing double taxation is therefore important for investors. For example, Sweden withholds tax on dividends at the rate of 30% for non-resident investors. But investors have an incentive to own shares in companies resident in countries such as the UK that have a 0% withholding rate. Many funds have chosen Ireland because of its attractive tax laws.[557]

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552 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 6.

553 *Ibid.*, Chapter 6.

554 *Ibid.*, section 6.1.

555 *Ibid.*, p 26.

556 Article 10 of the OECD's Model Tax Convention on Income and on Capital.

557 European Commission (2018) p 38: "Ireland is the leading European country for passive funds domiciliation thanks to advantageous double-tax treaties, in particular with the United States. The largest providers of ETFs in the world being American firms (Blackrock, Vanguard, and State Street) selected Ireland as fund domicile. Dublin is a historical European institutional platform for US funds and houses the European operational centres of the largest US funds services providers (e. g. fund administrators)."

The OECD Model Tax Convention, a model for countries concluding bilateral tax conventions, plays a role in removing tax-related barriers to cross-border trade and investment. It is the basis for negotiation and application of bilateral tax treaties between countries, designed to assist business while helping to prevent tax evasion and avoidance. The OECD Model Tax Convention also provides a means for settling on a uniform basis the most common problems that arise in the field of international double taxation.

Tax declarations and compliance with methods designed to reduce double taxation may nevertheless require work and are not cost-free.[558] Investing in local funds that invest in foreign securities would be easier for the investor as foreign tax formalities are then taken care of by the fund management company. Reducing the withholding tax rate to 0% for retail investors might help to increase retail investors' direct cross-border equity investments. Institutional investors can already avoid taxes through aggressive tax planning.[559]

Conclusion. There are constraints on retail investors' direct cross-border investments. Investments are hampered by laws.[560] More can be done to increase retail investors' direct cross-border investment opportunities.

Access to brokers and foreign exchanges does not seem to be a problem since retail investors can have access to foreign exchanges through local or foreign brokers. The problems seem to relate to complexity, taxes and other costs, issuers' compliance obligations generally, and the lack of cross-listings in retail investors' home country.

Whether retail investors are granted an opportunity to make direct cross-border investments depends on how competing policies are balanced in securities law. The problem is recognised in both the US and the EU. In the EU, the CMU action plan nevertheless is light on measures to increase retail investors' direct cross-border investments.

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558 See Articles 10, 22A and 22B of the OECD's Model Tax Convention on Income and on Capital.

559 European Commission (2017a).

560 See also European IPO Task Force (2015) pp 53–54, Aim 2.1: "Create a single market for retail investors to directly access public equity markets cross-border in Europe (in addition to investment with financial intermediation)". Recommendation 2.1.2: "Lower the costs of execution-markets cross-border in Europe (in addition to investment with financial only investment accounts by removing barriers to the development of platforms providing direct access to retail investors, such as cross-border brokerages or exchanges". Aim 2.2: "Ensure that EU legislation does not restrict investors' ability to invest". Recommendation 2.2.1: "Create a separate new impact assessment, which considers the cumulative effect of all EU financial regulation 2009–2014 for its impact on investors".

6.4.8 Increase Cross-Listings

Where a mutual recognition regime is not available, the number of companies with publicly-traded shares can be increased in the retail investors' home country by the listings of foreign companies, that is, cross-listings.

Firms choose cross-listings for many commercial, financial, and legal reasons (see also section 6.4.9 on depositary receipts).[561] The long-term trend of the integration of capital markets has not abolished cross-listings, because the reasons for cross-listings are not limited to the core functions of capital markets,[562] non-financial (commercial) markets generally are not yet very integrated, capital markets are integrated only to a limited extent, capital markets are not integrated for retail investors that have limited direct cross-border investment opportunities, and there is path dependency. For example, a company can have multiple listings for legacy reasons as firms grow through mergers and obtain legacy company shareholders in different countries.[563] In rare cases, a company's shares belong to two holding companies each with its own separate listing.[564]

The listings of foreign companies tend to be concentrated in some countries. The choice of exchange and the timing of cross-listings seem to be driven by the

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561 Karolyi GA (2006); Ghadhab I, Hellara S (2015); The Economist, Red capitalism, 17 October 2020, on why Chinese companies choose a listing in the US. For an earlier and narrower view influenced by economic theory, see Coffee JC Jr (2002) pp 1762–1763. For legal bonding, see Armour J, Bengtzen M, Enriques L (2018) pp 435–436.

562 Litvak K (2007) p 1861: "The cross-listing literature suggests there are two principal reasons why firms might decide to list on a foreign stock exchange: (i) to obtain greater liquidity for their shares and greater access to investor capital; and (ii) to bond the company to a better overall corporate governance regime (a combination of legal rules, securities regulations, accounting rules, listing standards, and analyst coverage)." Coffee JC Jr (2002) focuses on the role of the corporate governance regime. Karolyi GA (2006) focuses on dissatisfaction with the customary explanations.

563 For example, Nokia shares are listed on Nasdaq Helsinki since 1915. Nokia shares are listed even on Euronext Paris following the acquisition of Alcatel-Lucent in 2015. Nokia ADRs are listed on the NYSE in New York since 1994. Nokia shares or depositary receipts have been delisted from several exchanges.

564 For example, Unilever is the result of the merger of Margarine Unie and Lever Brothers. Unilever plc and Unilever N.V. used to have different primary listings. In 2020, Unilever unified its Group legal structure under a single parent company, Unilever PLC. Since 30 November 2020, Unilever trades with one class of shares on the Amsterdam, London and New York stock exchanges. ABB is incorporated as an Aktiengesellschaft under the laws of Switzerland. It is the result of the merger of the businesses of ASEA, a Swedish company, and BBC, a Swiss company. Between 1988 and 1999, each parent company held 50 percent of ABB. ABB is now listed on the SIX Swiss Exchange in Zürich, Nasdaq Stockholm, and the NYSE in New York.

desire to exploit higher market valuations. This trend has favoured the UK and US markets in the past.[565] In the EU, the harmonisation of the regulation of exchanges, companies, and securities markets reduces the cost of cross-listings (with a similar legal framework in all Member States) but makes cross-listings less relevant (as the benefits of regulatory arbitrage are reduced). We can, therefore, have a look at cross-listings in the US.

The listings of foreign companies are relatively common in the US market.[566] In a 2017 survey, a law firm studied the characteristics of so-called "emerging growth companies" (EGCs) that completed IPOs in the US in 2013–2016.[567] Of the 680 EGCs in the survey, 154 were so-called "foreign private issuers" (FPIs) under US securities law.[568] Of the 154 FPI EGC IPOs completed during the period, 61.0 % consisted of issuings of common or ordinary shares directly to investors. The rest were issuings of ADRs (section 6.4.9). 26.0 % of the FPI EGCs had securities that were listed on both a foreign exchange and a US exchange.[569]

The number of foreign stocks traded in the retail investors' home country can be increased by making listings in that country more attractive to issuers in general (section 6.4.2) and by making international cross-listings more attractive to issuers. Obviously, cross-listings and the use of ADRs increase costs.[570] While firms tend to choose cross-listings for various reasons, the number of cross-listings is reduced by high costs. The number of cross-listings can be increased by reducing costs.

To increase cross-listings, countries can reduce the overall costs of a listing (section 6.4.2) and the particular costs inherent in cross-listings. As regards the latter, costs can be reduced by applying the same requirements globally or in many countries. For example, costs were first increased by the Sarbanes-Oxley Act,[571] but the difference between the US and other countries in this respect was reduced by rising standards in other countries and increasing convergence.[572] Moreover, costs can be reduced by recognising practices applied in the

565 See Fernandes N, Giannetti M (2013).
566 See Armour J, Bengtzen M, Enriques L (2018) pp 432–433.
567 Morrison & Foerster LLP (2017).
568 *Ibid.*, p 3.
569 *Ibid.*, p 7.
570 Steil B (2002b) p 10.
571 For foreign listings in the US before the Sarbanes-Oxley Act, see Coffee JC Jr (2002) p 1772. For foreign listings after the adoption of the Sarbanes-Oxley Act, see Litvak K (2007); Karolyi GA (2006); Ghadhab I, Hellara S (2015).
572 Fernandes N, Giannetti M (2013): "Our finding that exchanges attract more foreign listings if they improve their investor protection is broadly consistent with their conclusion that SOX has not significantly hindered the competitiveness of U.S. exchanges."

foreign issuer's home country, and by making issuings that often precede an IPO easier for foreign issuers.

Making issuings that often precede an IPO easier for foreign issuers. A cross-listing is often preceded by testing the waters, that is, a lighter issuing of shares. Cross-listings can therefore be increased by making it easier for foreign issuers to take the steps that often lead to a full stock exchange listing. This can again be illustrated with US law.[573]

First, there is an exemption for certain private placements. A foreign company may set up a restricted programme under Rule 144A and Regulation S.

Rule 144A is an exemption from the registration requirements of Section 5 of the Securities Act of 1933. Any person other than an issuer may rely on Rule 144A. An issuer must find another exemption for the offer and sale of unregistered securities, such as Regulation S under the Securities Act. Rule 144A also means that companies can raise capital in the US privately without having to meet the ongoing reporting requirements associated with a SEC registration.

Under Section 5 of the Securities Act of 1933, all offers and sales of securities must be registered with the SEC or qualify for some exemption from the registration requirements. Section 4(a)(2) of the Securities Act exempts from registration transactions by an issuer not involving any public offering.[574] Rule 506(b) of Regulation D provides objective standards that a company can rely on to meet the requirements of the Section 4(a)(2) exemption. Rule 506(b) of Regulation D is considered a "safe harbor" under Section 4(a)(2). The securities offered under this exemption are regarded as "restricted securities". Restricted securities are identified in Rule 144(a)(3).

These rules are complemented by an exemption for the sale of restricted securities. Generally, restricted securities may not be resold unless there is an exemption from the SEC's registration requirements. Rule 144 allows the public resale of restricted and control securities under certain circumstances.

A foreign issuer that does not want to become subject to US reporting requirements can benefit from both exemptions. While a rule on private placements does not increase cross-listings and the number of companies with publicly-traded shares immediately, it can increase their number in the long run as private placements can make it easier for the issuer to increase the number

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573 Carow KA, Erwein GR, McConnell JJ (1999) p 55 on changes in the US in 1970 – 1997: "Traditional registered offerings have been partly displaced by shelf registered offerings and Rule 144 A private offerings. And once exclusively domestic U.S. offerings are increasingly being supplemented by foreign market offerings by U.S. companies, and by simultaneously domestic and foreign offerings."

574 Section 4(2) of the Securities Act was redesignated Section 4(a)(2) by the JOBS Act.

of shareholders and fulfil listing requirements in the future. However, the exemption applies to companies that issue shares to qualified investors only.

Second, certain rules and regulations apply to listed companies based in the US but do not apply to foreign private issuers.[575] Some regulatory and financial reporting relief was provided by the JOBS Act of 2012 and the acceptance of IFRS. For example, a foreign private issuer listed in the US may use US GAAP or IFRS[576] (but not a foreign set of standards for non-public entities)[577] and follow some home country corporate governance practices (but all foreign private issuers must comply with requirements relating to audit committees). Most foreign private issuers choose to apply their home country governance practices.[578] In addition, certain rules and regulations apply to listed companies based in the US but do not apply to foreign private issuers. Foreign private issuers do not have to: report on a quarterly basis; have a majority independent board; have a compensation or nominating committee; or receive shareholder approval for equity ′ compensation or other stock issuances.[579]

Third, a foreign issuer may list either ADRs (section 6.4.9) or common shares (with the same requirements). This helps to increase competition between stock exchanges for listings. Competition may influence listing rules, corporate governance rules, and cross-listings.[580] This said, firms take into account all relevant factors.

575 Rule 405 of Regulation C: "Foreign private issuer. (1) The term foreign private issuer means any foreign issuer other than a foreign government except an issuer meeting the following conditions as of the last business day of its most recently completed second fiscal quarter: (i) More than 50 percent of the outstanding voting securities of such issuer are directly or indirectly owned of record by residents of the United States; and (ii) Any of the following: (A) The majority of the executive officers or directors are United States citizens or residents; (B) More than 50 percent of the assets of the issuer are located in the United States; or (C) The business of the issuer is administered principally in the United States."

576 SEC Release Nos. 33 – 8879, 34 – 57026 (Dec. 21, 2007) (Acceptance From Foreign Private Issuers of Financial Statements Prepared in Accordance With International Financial Reporting Standards Without Reconciliation to U.S. GAAP).

577 One can note that emerging growth companies that are foreign private issuers may not report under IFRS for Small and Medium-sized Entities.

578 See also Morrison & Foerster LLP (2017) p 8: "The U.S. securities laws permit FPIs to choose to follow U.S. or their own home country governance principles for most matters, although there are specific U.S. requirements relating to audit committees that all FPIs must satisfy … Of the 154 FPI EGCs that completed IPOs during the period, 94.8 % chose to follow home country governance principles."

579 See NYSE website on international listings.

580 Coffee JC Jr (2002); Coffee JC Jr (1999); André T Jr (1998).

Choice of exchange. Firms choose between different stock exchanges for many reasons. Ernst & Young, a professional services firm, described the choice of an exchange as follows: "Listing standards, fees and regulatory environment are perhaps the final factors to consider when selecting a stock exchange. However, as important, if not more so, are factors such as valuation, the quality of an exchange's institutional investors and their understanding of a company's business, the likelihood of attracting research coverage, visibility to customers and suppliers and comparable companies trading on the market. If a company's selection of exchange does not have a clear connection to its business that makes sense to its investors, its valuation will likely be reduced. The selection of an exchange is a long-term strategic decision that should be determined primarily by a company's fundamental business drivers."[581]

Baker & McKenzie, a law firm, described the stock exchange market from the perspective of technology firms: "Technology companies undertaking capital raisings have a wide range of stock exchanges to choose from throughout the world. From major international finance hubs to other international markets that are particularly attractive to development-phase companies, more and more software, e-commerce, internet and other technology companies are considering cross-border capital raisings to address their corporate financing needs … The technology industry has an increasing choice in selecting among exchanges as companies consider factors such as the ability to meet listing criteria, regulatory environment for technology companies, location of industry peers, access to an investor base, and ongoing requirements and costs."[582]

Making it easier to use depositary receipts. One of the ways to increase cross-listings and multiple listings easier is to make it easier for issuers and investors to use depositary receipts.[583] Depositary receipts can bring many benefits for both issuers and investors (section 6.4.9).

6.4.9 Facilitate the Use of Depositary Receipts

A listed company may want to make its shares available to investors outside its own home country for many reasons (see also section 6.4.8).[584] For example, the

581 Ernst & Young (2009).

582 Baker & McKenzie (2017).

583 For depositary receipts, see, for example, Investor Bulletin: American Depositary Receipts. The SEC's Office of Investor Education and Advocacy, 17 August 2012.

584 Saunders M (1993) p 50. See even Depositary Receipt Services on the website of Deutsche Bank.

firm may want to increase its share price,[585] facilitate the use of stock options and employee benefit plans in foreign subsidiaries,[586] raise new capital, diversify its shareholder base, improve its profile outside its home country, use its shares as a means of payment to make acquisitions overseas, or avoid the legal and technical barriers to IPOs in its home country.[587]

However, investors might not have access to foreign shares in their own home country. First, investments in foreign shares may be hampered by securities laws and market organisation. For example, there may be legal constraints on the offering or sale of foreign securities to investors in their home country. Sometimes the issuer may not be able to choose a direct listing of its shares in the host country due to a lack of settlement linkage between its home country and the host country that is its preferred country of listing.[588] Second, investments in foreign shares may be hampered by high transaction costs and high costs of managing the investment. It may be difficult to find reliable information about foreign securities, it may be difficult to manage all the necessary technicalities of cross-border investment, and there may be increased costs when two countries do not share the same currency. Moreover, it might be rational for retail investors to reduce costs by avoiding foreign holdings if adding new countries to the portfolio increases costs and their investment portfolios are small.

To increase cross-border investment, it would therefore be necessary to make it easier for the issuer to manage regulatory compliance in the host country and to reduce issuers' and retail investors' transaction and other costs.

In practice, the issuer often tries to achieve this by turning to financial intermediaries and establishing a depositary receipt programme in the issuer's host country. Depositary receipts are a financial innovation pioneered in 1927 by Guaranty Trust, an American bank. They are designed to bridge different locations and jurisdictions and connect marketplaces.

Depositary receipt programmes can benefit both issuers and investors.[589] Depositary receipts make it possible for investors to trade in foreign securities by

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585 Velli J (1993) p S41.

586 *Ibid.*, p S41; Saunders M (1993) p 51.

587 Lu L, Ye N (2018) p 530.

588 Securities Markets Practice Group (2014), II: "Local depositary receipts are established for companies seeking to list their stock on a local exchange where a direct listing of foreign securities is not permitted or not possible due to a lack of settlement linkage between the country where the company is located and the country of listing. For example, Germany does not have a link to Euroclear UK & Ireland and hence, shares cannot be listed on a German Stock Exchange."

589 Saunders M (1993) p 51: "The expansion of the ADR market can be attributed to the significant benefits that accrue to both the ADR issuer and the security holder. For the foreign private

creating, in the investors' home country, domestic securities that represent foreign securities.[590]

Depositary receipts allow investors to hold foreign shares through a custodian. Under a depositary receipt arrangement, a portion of the issuer's shares is deposited with the custodian. The depositary customarily is located in the issuer's jurisdiction as proximity to the issuer makes it easier to obtain information about the issuer and its securities.[591] Depositary receipts are issued against the deposited shares.[592]

The value of depositary receipts reflects the value of the underlying securities. Depositary receipts can be bought and sold. Transactions can be settled in the host country where depositary receipts are issued to investors.[593]

Joseph Velli described the basic mechanisms of US depositary receipts in 1993 as follows:

"Let's assume that the very first trade takes place here in Glaxo's ADRs. A U.S. investor, whether it's an institutional investor or a retail investor, would simply call up his U.S. broker and say, 'Buy me 1,000 … Glaxo ADRs.' […]

The broker, because there are no ADRs outstanding here, goes to the foreign market, in this case the London market, buys 1,000 Glaxo shares off the London exchange, deposits those actual shares with the depositary bank … and then the depositary bank issues 1,000 ADRs in the U.S. marketplace. So the shares are deposited by the broker and [the depositary bank] would issue 1,000 ADRs. […]

Once the ADR is issued and outstanding, it freely trades like any other security. In the very next trade, if another investor calls up his broker and says, 'I want to buy 500 Glaxo ADRs,' the broker has a choice: he can either buy the ADR that is already existing in the U.S. marketplace, or he can repeat the process just described by going to the London Stock Exchange.

[…] If I own 1,000 Glaxo ADRs and want to sell those ADRs, but cannot find a buyer, I simply would cancel those ADRs and sell the actual shares back into the

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issuer, ADRs provide a new market for securities that is cost-effective, with minimum disclosure and attendant potential liability. For the security holder, ADRs offer the opportunity to own foreign securities through a mechanism that affords the advantages normally associated with ownership of securities of domestic U.S. issuers."

590 Velli J (1993) pp S41–S42; Saunders M (1993) p 51.

591 Saunders M (1993), p 54.

592 *Ibid.*, pp 51–52: "The registration of ADR certificates in the record holder's name on the books of the depositary facilitates (i) the payment of dividends to security holders, (ii) the transfer of ownership of deposited securities, and (iii) communications between the foreign private issuer and security holders."

593 *Ibid.*, p 53: "The mechanics of ADR transfers are similar to those utilized in transfers of other U.S. security instruments."

home market, in Glaxo's case, in London. Thus, ADRs can be created or issued, they can be transferred here like any other U.S. security, or they can be canceled."[594]

Depositary receipts can thus be defined as follows: "Depositary receipts are certificates representing ownership of underlying shares held by intermediaries, usually known as depositaries, in safe custody. The depositary holds the share certificates and issues the depositary receipts. It collects the dividends and distributes them to the holders of depositary receipts. The depositaries are therefore generally considered as legal shareholder. Depositary receipts are tradable instruments and a useful means to facilitate the listing of a foreign stock on a local exchange where a direct listing is not possible."[595]

While the foreign securities are listed in the issuer's home country and denominated in a foreign currency, depositary receipts are either unlisted or listed in the investors' home country and denominated in the local currency.

Creating a secondary market for shares under a depositary receipt programme can precede an IPO of shares in the host country if it turns out that there is sufficient demand for shares in the host country.[596]

Depositary receipts can be sponsored or unsponsored. In an unsponsored depositary receipt programme, there is no contractual relationship between the depositary bank and the issuer.[597] An unsponsored facility may be initiated by a broker-dealer wishing to establish a trading market.[598] One or more depositary banks will then issue depositary receipts in response to market demand without the company's participation.[599] Since the issuer of shares is not directly involved in an unsponsored depositary receipt programme, the rights of depositary receipt holders in relation to the company are very limited even though holders derive some of the economic benefits afforded to ordinary shareholders.[600] Unsponsored depositary programmes were not very popular in the past.[601]

The issuer is able maintain a greater degree of control in a sponsored depositary receipt programme. A sponsored depositary receipt programme is based on contract between the issuer and the depositary bank.[602]

594 Velli J (1993) pp S38–S40.
595 European Commission (2004) section 5.3, pp 14–15.
596 Saunders M (1993) pp 57–58.
597 See Saunders M (1993) pp 55–57.
598 Staff of the Division of Corporation Finance of the SEC (2013).
599 Securities Markets Practice Group (2014), II.
600 *Ibid.*
601 Velli J (1993) p S43.
602 See Saunders M (1993) pp 55–56.

No depositary receipts would exist without the help of intermediaries. To create and manage depositary receipts, banks provide a large number of specialist services.[603] For a depositary receipt programme the issuer needs a depositary (often the central depositary),[604] a depositary agent, and a custodian. The issuer may also need investment banks, underwriters, and a lead manager. The depositary and the issuer need the services of lawyers and accountants as well.

For example, a bank listed its services as follows: "Custody of the issuer's domestic shares in the local market. Issuance of depositary receipts. Receipt of dividend payments from the company, conversion into the currency of the depositary receipts, and distribution to the depositary receipt investors. Registrar services for the depositary receipts. Transmission of shareholder information to the depositary receipt holders, including proxy forms, annual reports and other corporate action materials. Issuer reporting, providing information to the company on the activity of its depositary receipt programme. Cancellation of depositary receipts and release of the underlying shares to the investor or designated broker. Tax reclaim services for investors in many countries. Controlled pre-release facilities for broker dealer to facilitate a more liquid depositary receipts market."[605]

In the EU, such specialised financial intermediaries are regarded as investment firms and systematic internalisers.[606]

The regulation of depositary receipts in the US. Depositary receipt programmes have been the most important way for foreign companies to obtain a listing in the US.[607] They have been popular for many reasons. For example, they may have been used to increase share price.[608]

American depositary receipts (ADRs) are depositary receipts offered in the US market to US investors. They are traded and settled in the US, allowing

603 Generally, see Securities Markets Practice Group (2014), III—IV.

604 See even Velli J (1993) p S56.

605 Deutsche Bank website, Depositary receipts, February 2015.

606 Recital 17 and point (20) of Article 4(1) of Directive 2014/65/EU (MiFID II).

607 Velli J (1993) p S38: "It is also important to realize that, excluding Canadian companies, the vast majority of non-U.S. companies use ADRs when they decide to list in the United States. In fact, some of these companies are more actively traded in the United States than in their home country."

608 *Ibid*., p S41. Coffee JC Jr (1999) suggests the existence of a "bonding" mechanism in which the foreign issuer is increasing the value of its public shares by agreeing to comply with the disclosure standards that prevail in the US. See also Aggarwal R, Dahiya S, Klapper L (2005). However, the valuation of shares in the US can be increased by the relative size of US capital markets, the large share of institutional investors, and the volume-based incentives of many institutional investors (such as fund managers).

ADR holders to avoid effecting transactions in a foreign currency. In other words: "ADRs are issued by a depositary bank in the United States, and represent the deposit of the foreign company's shares in a custodian bank, usually in the foreign company's home jurisdiction. Pursuant to the terms of the underlying deposit agreement, ADR holders may exchange ADRs for the representative number of shares in the foreign company. Conversely, those holding shares in the underlying foreign company may deposit such shares in exchange for ADRs."[609]

An American depositary receipt (ADR) therefore is "a negotiable certificate that evidences ownership of American depositary shares (ADSs) which, in turn, represent an interest in a specified number (or fraction) of a foreign company's shares". While an ADR is the physical certificate evidencing an ADS, the terms ADR and ADS are often used interchangeably by market participants.[610]

Institutional investors are responsible for the large interest in the trading of ADRs.[611] In October 2008, the SEC made it easier to establish depositary receipt programmes for OTC-traded ADRs based on foreign listed securities. The changes increased the number of ADR programmes. In 2018, US depositary receipt volumes were larger than the combined depositary receipt volumes in the rest of the world.[612]

As a rule, ADRs fall within the scope of the Securities Act of 1933 and the Securities Exchange Act of 1934. Public distributions by a foreign private issuer of ADRs in the US are governed by the Securities Act. Secondary trading in ADRs in US capital markets is governed by the Exchange Act. Generally, ADRs are traded in the US using the same facilities as equity securities.[613]

This said, US securities law makes it possible for an issuer to choose between several different depositary receipt structures and different levels of exposure to US securities laws depending on the level of the exposure of investors resident in the US.[614]

From an American perspective, one can distinguish between sponsored and unsponsored depositary receipt programmes, between American depositary receipts (ADRs) and global depositary receipts (GDRs), as well as between Regulation S (Reg S) global depositary receipts, Rule 144A global depositary receipts, and Level I to III ADRs.

609 Staff of the Division of Corporation Finance of the SEC (2013), V.
610 *Ibid.*, V.
611 Aggarwal R, Dahiya S, Klapper L (2005) p 2.
612 BNY Mellon, The 2019 Depositary Receipt Market Review.
613 Saunders M (1993) pp 57–58.
614 See Securities Markets Practice Group (2014), II.

The distinction between sponsored and unsponsored depositary receipt programmes has a connection to the principle of voluntarism (section 6.4.7). Where the issuer of the underlying securities has not actively participated in the establishment of the depositary receipt facility, the issuer is not deemed to have voluntarily entered the US capital markets and is not regarded as the person responsible for the programme's compliance with US securities law. Unsponsored depositary receipt facilities do not require the active participation of the issuer of the underlying securities.

The distinction between unsponsored and sponsored depositary receipts can influence the liability of the issuer for securities fraud under US securities law, in particular under SEC Rule 10b-5 that is based on section 10(b) of the Securities Exchange Act of 1934. In *Morrison v. National Australia Bank Ltd.*,[615] the US Supreme Court held that section 10(b) of the 1934 Act had no extraterritorial application. Therefore, SEC Rule 10b-5 can only apply to domestic transactions.[616] The Court identified domestic transactions as those that are "in connection with the purchase or sale of a security listed on an American stock exchange, and the purchase or sale of any other security in the United States." A commentator drew the conclusions that "unsponsored ADR programs … should not create potential Rule 10b-5 liability for companies abroad", "sponsored ADR programs that are listed on American exchanges should be subject to Rule 10b-5", and "ADR programs that do not trade on American exchanges … should be covered under section 10(b) of the 1934 Act because their issuer's purposeful and relatively extensive entry into the U.S. securities market ultimately makes them domestic transactions".[617]

Some depositary receipt programmes have been unsponsored: "For example, a foreign dealer or private shareholder may deposit securities of a foreign private issuer with a depositary in order to establish an unsponsored ADR facility. This usually occurs when a U.S. trading market previously had been created for the foreign private issuer's outstanding securities."[618] While unsponsored ADR programmes were not popular in the past,[619] depositary banks significantly increased the number of unsponsored ADR programmes in 2008 after the SEC

615 Morrison v. National Australia Bank Ltd., 561 U.S. 247 (2010).
616 Chiappini VM (2011) pp 1795–1796.
617 *Ibid.*, p 1796. See even Armour J, Bengtzen M, Enriques L (2018) pp 443–445.
618 Saunders M (1993) pp 60–61.
619 Velli J (1993) p S43; Saunders M (1993) p 55.

amended an exemption that applied to foreign issuers.[620] An automatic exemption granted to foreign issuers that meet certain conditions got rid of written application and paper submission requirements. Unsponsored ADRs can be traded in the OTC market.

Global depositary receipts (GDRs) are different. GDR is the generic name of depositary receipts that are not ADRs. In other words, GDRs are offered outside the US market to non-US investors, and traded and settled outside the US. GDR programmes are often established for the purpose of raising capital. GDRs can therefore be placed in two or more markets. If they are placed with qualified US buyers, trading and settlement can take place even in the US.[621] Generally, GDRs do not fall within the scope of US securities law.

From a legal perspective, both ADRs and GDRs are depositary receipts. Different terms are used for marketing purposes[622] or to distinguish between depositary receipts that fall within the scope of US securities law and those that do not.

Regulation S global depositary receipts generally are not available to US resident investors. Regulation S under the Securities Act of 1933 exempts offerings of securities from registration in the US when the offering is outside of the US. Reg S GDRs can be either listed on a foreign stock exchange or unlisted.[623]

Where a non-US company wants to raise capital in the US, it can choose between two alternative ways. It can either make a private placement under Rule 144A or make a public offering.[624] Rule 144A GDRs are placed exclusively with large investors (Qualified Institutional Buyers or QIBs as defined by the SEC) in the US. Although Rule 144A GDRs are used to raise capital in the US, registration and reporting requirements are minimal because of the restricted investor base. Rule 144A GDRs are often placed with US QIBs in conjunction with a Regulation S GDR offering to non-US investors. Once the private placement is completed, these large investors can trade the 144A depositary receipts among themselves or, under Regulation S, cancel the ADR and sell the actual shares back into the issuer's home country.[625] Where the company wants to take advantage

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620 The Rule 12 g32(b) exemption was automatically granted to non-US companies that fulfilled certain criteria. Before the October 2008 rule change, non-U.S. companies had to apply for exemption and also adhere to specific documentation requirements.

621 Deutsche Bank website, Global Depositary Receipts (GDRs), 7 July 2018: "GDR programs are generally established for capital raising purposes, with European component structured to comply with Regulation S (Reg S GDRs), and in some instances, with a US component structured as a private placement under Rule 144A (Rule 144A GDRs)."

622 Velli J (1993) p S45.

623 Securities Markets Practice Group (2014), II.

624 Velli J (1993) p S51.

625 *Ibid.*, p S53.

of US markets on a larger scale and without the limitations of a private placement, it chooses a public offering.[626]

Market participants generally have categorised ADRs into three "levels" depending on the extent to which the foreign company has accessed the US markets.[627]

Level I ADRs involve neither the raising of capital nor a listing on a US stock exchange. They are traded on the US over-the-counter (OTC) market. Level I ADRs allow for increased exposure to US-based investors with minimal additional reporting obligations. Level I programmes often provide a first step into the US public markets.[628]

The company can increase its US investor base by upgrading to Level II or Level III ADRs.[629] This can be done through listing a different ADR programme on a stock exchange, or by making an exchange offer.[630] Level II ADRs are listed on a US stock exchange but do not involve the raising of capital. Level III ADRs are for public offerings. Level III ADRs are used to raise new capital and provide a listing on a US stock exchange. Level III ADRs provide the maximum exposure to the US investment community.

Registration obligations depend on the extent to which the foreign company has accessed the US markets. Because an ADR essentially represents two separate securities, namely American depositary shares (ADSs) and the underlying shares of the foreign company, "a registration analysis must be made for each security".[631] An ADR facility may not be established unless the issuer is either subject to the reporting requirements under the Exchange Act or is exempt from the reporting requirements.[632] The resale exemptions include Rule 144 under the Securities Act of 1933, Regulation S, and Rule 144A.

The regulation of depositary receipts in the EU. In the EU, depositary receipts have been on the European Commission's radar for many years.[633] Depositary receipts are regarded as financial instruments. For this reason, depositary receipts fall within the scope of the same regulatory regime as financial instruments in

626 *Ibid.*, p S54.
627 Staff of the Division of Corporation Finance of the SEC (2013), IV.
628 Velli J (1993) p S44.
629 *Ibid.*, p S45.
630 *Ibid.*, pp S53–S54.
631 Staff of the Division of Corporation Finance of the SEC (2013), V.
632 Pursuant to Rule 12 g3 – 2(b) of the Securities Act of 1933. Acquiring the Rule 12 g3 – 2(b) exemption enables a foreign private issuer to have its equity securities traded on a limited basis in the OTC market in the US while avoiding registration under Exchange Act Section 12(g). See Staff of the Division of Corporation Finance of the SEC (2013), III.A.4.
633 See European Commission (2004) section 5.3, pp 14 – 15.

general, and the business of the participating financial intermediaries can fall within the scope of the regulatory regime that applies to investment firms in general. Depositary receipts and the business of participating financial intermediaries can thus fall within the scope of MiFID II, CRD IV, the Prospectus Regulation, and the applicable listing rules.

Depositary receipts are defined in MiFID II.[634] Under MiFID II, depositary receipts in respect of shares are regarded as "transferable securities".[635] "Transferable securities" are regarded as "financial instruments" that fall within the scope of MiFID II.[636] Depositary receipts are defined as "those securities which are negotiable on the capital market and which represent ownership of the securities of a non-domiciled issuer while being able to be admitted to trading on a regulated market and traded independently of the securities of the non-domiciled issuer".[637]

While depositary receipts have been defined in MiFID II, European Depositary Receipts (EDRs) have not been defined therein. EDRs are simply depositary receipts that are traded and settled in the EU. EDRs generally enable investors that are resident in the EU to trade in the listed shares of companies that are not domiciled in the EU.

The offering of depositary receipts to the public falls within the scope of the Prospectus Regulation.[638] According to the wording of the Prospectus Regulation, "securities shall only be offered to the public in the Union after prior publication of a prospectus"[639] that has been approved by the relevant competent authority[640] in a Member State of the EU.[641]

The offering of depositary receipts can benefit from the generally applicable exemptions from the obligation to publish a prospectus.[642]

This said, the offering of depositary receipts in the EU is hampered by the regulatory regime. This is because of five main things: depositary receipts fall within the scope of the regulatory regime that applies to financial instruments in general; the regulatory requirements are applied in respect of depositary re-

634 Point (45) of Article 4(1) of Directive 2014/65/EU (MiFID II).
635 Point (44) of Article 4(1) of Directive 2014/65/EU (MiFID II). See also Article 49(1) of Directive 2014/65/EU (MiFID II) on tick size regimes.
636 Point (15) of Article 4(1) of Directive 2014/65/EU (MiFID II).
637 Point (45) of Article 4(1) of Directive 2014/65/EU (MiFID II).
638 Recital 10 of Regulation 2017/1129 (Prospectus Regulation).
639 Article 3(1) of Regulation 2017/1129 (Prospectus Regulation). For the definition of an "offer of securities to the public", see point (d) of Article 2.
640 Article 20(1) of Regulation 2017/1129 (Prospectus Regulation).
641 Point (o) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
642 Articles 1(3)—1(6) and 3(2) of Regulation 2017/1129 (Prospectus Regulation).

ceipts and the underlying securities separately and independently; shares and depositary receipts are not recognised as functional equivalents; the notion of offering securities to the public is a broad one; and certain quantitative criteria or exemptions can only be applied to shares or depositary receipts separately.

First, the fact that the offering of EDRs falls within the scope of the generally applicable regulatory regime for financial instruments can lead to extensive compliance requirements under MiFID II and the Prospectus Regulation, because shares and depositary receipts are regarded as different kinds of financial instruments and these financial instruments can be issued or offered to the public by different parties.

Second, there can be cumulative requirements in the same context, because EDR offerings and share offerings are treated separately. The duty to comply with obligations in respect of EDR offerings is not connected to compliance with obligations in respect of share offerings. In capital market practice, however, both kinds of offerings often are used at the same time. Markets use EDRs and shares partly as functional equivalents, partly as complements.

Third, EDRs and shares are not recognised as functional equivalents. They are treated differently in the Prospectus Regulation that distinguishes between "equity securities" and "non-equity securities".

While shares in companies are regarded as "equity securities", depositary receipts for shares are not regarded as "equity securities" unless the depositary receipts are issued by the company itself or by an entity belonging to the same group. This is because of the wording of the Prospectus Regulation: "… 'equity securities' means shares and other transferable securities equivalent to shares in companies, as well as any other type of transferable securities giving the right to acquire any of the aforementioned securities as a consequence of their being converted or the rights conferred by them being exercised, provided that securities of the latter type are issued by the issuer of the underlying shares or by an entity belonging to the group of the said issuer …"[643] All other depositary receipts are regarded as "non-equity securities".[644]

Fourth, under some circumstances, not only the intermediary that is the issuer of the depositary receipts but even the issuer of the underlying securities could be regarded as the issuer of the depositary receipts for the purposes of the Prospectus Regulation. The Prospectus Regulation contains a very broad definition of the offering of securities to the public. According to the wording of the Prospectus Regulation, the definition "also applies to the placing of securities

643 Point (b) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).
644 Point (c) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).

through financial intermediaries".[645] In effect, a sponsored depositary receipt facility could mean "the placing of securities through financial intermediaries". Were the Prospectus Regulation interpreted in this way, some of the regulatory compliance obligations of the issuer of depositary receipts would apply to the company – the issuer of the underlying securities – as well. Moreover, the company would not be exempted from obligations under the Prospectus Regulation in the event that the depositary receipts were issued by a financial intermediary under a sponsored facility.

Fifth, the classification of depositary receipts in the Prospectus Regulation means that depositary receipts benefit from fewer exemptions than shares. While offerings of depositary receipts for shares benefit from exemptions that apply to securities offerings in general, they do not benefit from exemptions that only apply to share offerings in particular. Some exemptions do not apply to securities in general (as some exemptions apply either to shares or non-equity securities).[646]

Sixth, combined with the separate treatment of these two functional equivalents, quantitative limits or thresholds may make it more difficult to issue shares or depositary receipts or to benefit from exemptions.[647]

If the offering of depositary receipts in the EU is hampered by the regulatory regime, one may ask to what extent the regulatory regime hampers cross-border retail investment. The offering of depositary receipts is not really necessary if retail investors can invest in the underlying shares.

On one hand, one might argue that the regulatory regime does not hamper cross-border retail investment. In the EU, the internal market is based on the four freedoms such as the free movement of capital and freedom to provide services. Since the Financial Services Action Plan (FSAP),[648] the goal of the European Commission has been to create a single market for financial services. More and more financial service providers are able to offer their services across the Union thanks to "a single passport" regime and a common investor protection

645 Point (d) of Article 2 of Regulation 2017/1129 (Prospectus Regulation).

646 Points (e) and (h) of Article 1(4) of Regulation 2017/1129 (Prospectus Regulation); points (b), (d), (g) and (i) of Article 1(5) of Regulation 2017/1129 (Prospectus Regulation).

647 Points (e), (h) and (j) of Article 1(4) of Regulation 2017/1129 (Prospectus Regulation). See also Article 1(5) of Regulation 2017/1129 (Prospectus Regulation).

648 The purpose of the Financial Services Action Plan (FSAP) was to create a single market for financial services within the EU by the end of 2004. The cornerstone of the FSAP was the Markets in Financial Instruments Directive 2004/39/EC (MiFID).

regime with harmonised rules.[649] The passport mechanism is designed to increase cross-border investment.[650]

On the other, the European Commission has recognised that the free movement of capital has not resulted in an integrated capital market: "Despite the progress that has been made over the past 50 years, Europe's capital markets are still relatively underdeveloped and fragmented."[651] The Commission launched its Capital Markets Union action plan in September 2015 to address this problem and create an integrated single market for capital. In the light of the popularity of ADRs in the US and the modest integration of European markets, the Commission would have reason to study whether the use of depositary receipts could help.

The regulation of depositary receipts in China. In China, the CSRC released Measures for the Issuance and Trading of Chinese Depositary Receipts in June 2018. Chinese depositary receipts (CDRs) are modelled on similar financial instruments such as American Depositary Receipts (ADRs) and European Depositary Receipts (EDRs) that enable US and European investors to purchase the shares of foreign incorporated companies. The objective of regulating and issuing CDRs, however, is to change capital flows in the opposite direction. The objective is to "lure capital back to the Chinese market to drive economic growth and push forward capital market reform. It will be a convenient method for overseas-listed Chinese companies to dual-list their shares in mainland China with minimal regulatory intervention."[652]

Conclusion. Depositary receipts could make it easier for retail investors to invest in foreign stocks. In the US, the issuing of depositary receipts falls within a complex regulatory regime but is popular. The issuing of depositary receipts is to some extent hampered by the European regulatory regime. To compete with US markets and increase cross-border investments, the European regulatory regime should be made more attractive.

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649 The Single Market in a changing world – A unique asset in need of renewed political commitment. Communication from the Commission, COM(2018) 772 final, section 1.2.1.

650 Recitals 3, 23 and 47 of Regulation 2017/1129 (Prospectus Regulation).

651 Action Plan on Building a Capital Markets Union, Communication from the Commission, COM(2015) 468 final, Introduction.

652 Lu L, Ye N (2018) pp 530–531.

6.4.10 Make it Easier for Retail Investors to Take Rational Investment Decisions

To facilitate retail investors' direct equity investments in many more companies, company and securities law should make it easier for retail investors to take rational investment decisions.

Retail investors can take reasonable decisions provided that their investment preferences are reasonable, their decisions are based on useful information, and their decision-making process is sufficient to lead to decisions that reflect their reasonable investment preferences. This can require rules on the public disclosure of issuer information, disclosure of information about the relevant securities, disclosure of information about the modalities of investment, a way to make investors understand what kinds of investment preferences would be rational and reasonable for them, and rules on investment advice. Moreover, this raises the broader question of how to protect retail investors.

Reduce abuse and increase trust. Traditionally, the first step has been to reduce the risk of abuse. For example, abuse was addressed by the French law of 1856 that made the creation of a conseil de surveillance – monitoring council – mandatory for a limited partnership with shares (section 2.4.5), by the German company law reform of 1884 that developed the separation of functions and the two-tier board (sections 3.4.5 and 3.4.9), by rules on disclosures to the public (section 2.4.7), and by the passing of the Securities Act of 1933 and the Securities Exchange Act of 1934 (section 4.2.3).

Abuse can take many forms.[653] As regards corporate governance, potential abuse should be addressed by addressing all its components (section 2.3.3).[654] Generally, abuse can be addressed by making the company's governance model more self-enforcing (section 6.3.11), by adopting rules that make company representatives act in the long-term interests of the firm (section 2.4.13), by the sufficient transparency of companies (section 2.4.7),[655] and by providing for an effective enforcement mechanism that is not dependent on the resources of individual investors (section 2.4.11).

653 See, for example, Bebchuk LA, Fried JM, Walker DI (2002).
654 See Kremer M (1993) on the O-ring theory.
655 For example, the European Parliament has stated "the CMU should create an appropriate regulatory environment that enhances cross-border access to information on the companies looking for credit, quasi-equity and equity structures, in order to promote growth of non-bank financing models, including crowdfunding and peer-to-peer lending". Paragraph 47 of the European Parliament resolution of 9 July 2015 on Building a Capital Markets Union (2015/2634(RSP)).

It is neither economically meaningful nor possible to prevent all abuse. However, enough should be done to create a sufficient level of trust for retail investors to be confident enough to make equity investments. There can be ways to increase mutual trust (section 6.3.5).

Screening and signalling. In any case, abuse can be addressed and trust can be increased by the screening of companies that may issue shares to the public. The screening of companies that may issue shares to the public can help to reduce the number of bad issuers and investors' perceived risk.

In information economics, screening is regarded as a possible way to address informational asymmetries and reduce adverse selection. Screening is complemented by signalling.[656]

Screening and signalling can be done in various ways. First, there can be different company forms with some company forms designed for the issuers of shares to the public (section 2.4.9). As regards such company forms, there can be statutory requirements designed to reduce abuse. Such requirements may apply at the time of registration (such as minimum capital rules) or during the life of the company (such as a two-tier board structure, the allocation of power in transactions, bright line rules, incentives, and enforcement mechanisms). Second, there can be particular statutory requirements for legal entities that issue shares to the public or whose shares are admitted to trading. Third, the screening can be done by the companies registry, the financial supervision authority, or the operator of the marketplace.

Since reducing abuse requires the regulation of very many issues, it can be challenging to design a sufficient package of measures that are both easy for issuers to understand and comply with and sufficiently easy for retail investors to understand and trust.

The new objective – facilitating retail investors' direct investment in shares issued by many more companies – proposed in this book may require new legal tools and practices.

Protect retail investors as a class and each investor separately. Should retail investors be protected as a class in the customary circumstances or each individual retail investor separately in the particular circumstances of the case?[657] What is the minimum level of investor protection?

656 This field of research was pioneered by Akerlof, Spence, and Stiglitz who shared the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel in 2001 "for their analyses of markets with asymmetric information".

657 Directive 2014/65/EU (MiFID II) and Commission Delegated Regulation (EU) 2017/565 protect the interests of investors and the integrity and functioning of financial markets.

Where the regulatory regime is designed to protect each retail investor in the particular circumstances of the case, the risks and compliance costs of their counterparties are increased. This increases specialisation. To manage the risk exposure and reduce compliance costs, some intermediaries specialise in retail business and in the management of regulatory compliance in retail market. EU financial markets law largely reflects this model.[658]

The alternative is to protect retail investors as a class. For example, all retail investors could be assumed to share the same characteristics under this model. Where the regulatory regime is designed to protect either retail investors as a class or the standard retail investor with the customary characteristics, the risks and compliance costs of their counterparties are reduced. Costs are reduced when counterparties can standardise and automatise operations based on known customer characteristics. Moreover, this alternative makes it easier for issuers to do business directly with retail investors. For example, when applied to disclosures, this alternative could mean the use of a materiality standard and the standard of a reasonable investor.[659] This alternative could even mean the existence of a duty to place customers in categories (rather than a duty to take into account the individual characteristics of each customer),[660] a duty to disclose standard information to investors,[661] and the assumption that investors after such disclosures can take rational investment decisions.[662] A large disclosure-based system such as the market regulation model of common law countries would be too costly unless retail investrory were protected as a class.

To combine the benefits of both approaches, regulators could choose to protect retail investors as a class when designing the legal framework, and complement the regulatory regime[663] in other ways to make it possible to protect each

658 Mäntysaari P (2010a) section 10.7.

659 TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976). Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Davis Polk & Wardwell LLP dated 22 July 2016 discussing TSC Industries, materiality, and the reasonable investor standard.

660 Article 24(5) of Directive 2014/65/EU (MiFID II). See also recitals 71 and 82 and Articles 16(3) and 25(2).

661 Article 44(2) of Commission Delegated Regulation (EU) 2019/565: "Investment firm shall ensure that the information referred to in paragraph 1 complies with the following conditions: … (d) the information is sufficient for, and presented in a way that is likely to be understood by, the average member of the group to whom it is directed, or by whom it is likely to be received …" Brenncke M (2018) p 865: "… MiFID II provides no guidance on the difficult issuer of incorporating empirical data into the interpretation of advertising provisions."

662 See also Brenncke M (2018) p 862.

663 For the various kinds of rules that define a market, see Ostrom E (2005); Ostrom E (2010).

investor separately. Such mechanisms include at least education, the use of advice engines, and the use of mechanisms that nudge retail investors to take more rational decisions that are less compromised by bias (see below).

In the EU, the MiFID II system of investor protection to a large extent is based on mandatory disclosures, the prohibition of misleading information,[664] and the freedom of investors to take decisions on an informed or uninformed basis, biased or unbiased.[665] It therefore needs to be complemented by other mechanisms.

Education. Where retail investors primarily are protected as a class, the particular information needs of each investor will have to be addressed in other ways.

Investors need information about reasonable investment preferences. They need information about the fundamental concepts and how to apply them.[666] What can be perceived as reasonable investment preferences can depend on the country, the culture, the characteristics of the individual, and even bias.[667]

Reasonable investment preferences can be taught. There is a need for education to increase financial literacy.[668] Retail investors can be educated by financial intermediaries, states, market supervisors, NGOs, labour unions, or other parties.[669] Because of the weak connection between any single channel of investor education and downstream financial behaviour, the use of multiple channels and various forms seems to be the best alternative to improve financial literary and financial behaviour.[670]

Investor education can be illustrated with some examples from the US: (a) In 1933, the adoption of the Securities Act that increased disclosures created a need to slowly educate investors and make them financially literate.[671] (b) In the 1950s, Merrill Lynch courted the small investor and invested in public education

664 Article 24(3) of Directive 2014/65/EU (MiFID II).
665 Article 24(5) of Directive 2014/65/EU (MiFID II). See also Brenncke M (2018) pp 862–863.
666 See, for example, Lusardi A, Mitchell OS (2014) p 10: "Several fundamental concepts lie at the root of saving and investment decisions as modeled in the life cycle setting … Three such concepts are: (i) numeracy and capacity to do calculations related to interest rates, such as compound interest; (ii) understanding of inflation; and (iii) understanding of risk diversification."
667 Falk A, Becker A, Dohmen TJ, Enke B, Huffman D, Sunde U (2018); Pursiainen V (2019).
668 Grifoni A, Messy FA (2012); Lusardi A, Mitchell OS (2014); European Commission (2018) p 98; Group of Thirty (2019) pp 61–62.
669 See, for example, Fanto JA (1998c) p 146.
670 See Willis LE (2008) and Willis LE (2011) against financial education. See Fernandes D, Lynch JG Jr., Netemeyer RG (2014) and Kaiser T, Menkhoff L (2017) on the connection between financial education and behaviour.
671 Douglas WO, Bates GE (1933) pp 171–172.

efforts "to bring Wall Street to Main Street".[672] This made sense for Merrill Lynch in the light of the fact that individual retail investors owned over 75 % of all outstanding corporate equities in the US in 1951.[673] (c) In 2015, Regulation Crowdfunding[674] adopted by the SEC required the crowdfunding intermediary to provide investors with educational materials, among other things.[675] Under Regulation Crowdfunding, educational materials must be provided through electronic means when the account is opened,[676] and the intermediary must make the most current version of its educational material available on its platform at all times.[677] Each time before accepting any investment commitment, an intermediary must obtain from the investor a representation that the investor has reviewed the intermediary's educational materials, among other things.[678] (d) In 1993, the SEC created the Office of Investor Education and Advocacy to serve individual investors. The office also carries out the SEC's investor education programme.[679] Moreover, investor education is complemented by the SEC's plain English requirements. (e) The North American Securities Administrators Association (NASAA) and its members educate investors to make informed financial decisions. Moreover, labour unions (such as AFSCME)[680] can work to promote the economic security of their members even by offering investor education programmes (such as the AFSCME Investor Education programme). (f) In the mid-1970s, basic investor education entered the high school curriculum in many states.[681] (g) In 2020, zero-commission brokerages such as Robinhood provided free online education resources available to everyone.[682] (h) Rapunzl gamified investor education by providing zero-risk customized investment competitions for simulated trading.[683]

672 Smith WH Jr (2013) pp 194–200.
673 Jacobs JB (2011) p 1650.
674 SEC Release No. 33–9974 (Oct. 30, 2015) (Regulation Crowdfunding).
675 Regulation Crowdfunding, §227.302(b).
676 Regulation Crowdfunding, §227.302(b)(1).
677 Regulation Crowdfunding, §227.302(b)(2).
678 Regulation Crowdfunding, §227.303(b)(2)(i).
679 See Fanto JA (1998c) p 156.
680 The American Federation of State, County and Municipal Employees. AFSCME is part of AFL–CIO.
681 Fanto JA (1998c) p 138.
682 Tenev V (2021), VII.
683 Rapunzl Investments LLC, Business Plan 2017–2021, p 5: "Our addressable market is segmented into two entities: simulated trading and integrated live-brokerage accounts. A synthesis of simulated trading and live trading is unique in the current marketplace and creates a sustainable pipeline for new user acquisition as simulated traders gain comfortability with the platform before entering peak-earning years when they will begin investing."

Generally, public and private educational efforts in the US tend to focus on "basic saving, investing, and anti-fraud education".[684]

There is much less interest in the development of public investor education programmes in the EU. This goes hand in hand with the low or deteriorating levels of financial literacy in Europe.[685] There is plenty of variation between different countries regarding the level of financial literacy.[686]

While the development of public investor education programmes was recommended by the EU IPO Task Force,[687] the European Commission preferred to allocate the responsibility for investor education to "the finance industry" in the Capital Markets Union (CMU) action plan.[688] In effect, investor education is reduced to a marketing effort in the EU.[689]

The different approaches to investor education in the US and the EU can be illustrated by comparing the SEC's Regulation Crowdfunding with the EU's Regulation on European Crowdfunding Service Providers (ECSP) for Business.[690] Unlike the SEC's Regulation Crowdfunding, the European Regulation is light on education. The latter provides for an initial assessment of the appropriateness of a potential client and requires platforms to offer investors the possibility to simu-

684 Fanto JA (1998b) p 18.

685 Group of Thirty (2019) p 61; Brenncke M (2018) p 866; European Commission (2018) pp 99 and 106.

686 Jappelli T (2010); Atkinson A, Messy FA (2012); Klapper L, Lusardi A, van Oudhousen P (2015).

687 European IPO Task Force (2015) p 56, Recommendation 4: "Create an equity culture in Europe, including the provision of education and non-legislative initiatives". Aim 4.2: "Promote the financial education of both investors and companies as users of capital markets". Recommendation 4.2.1: "Promote the financial education of investors". Recommendation 4.2.1.1: "Educate investors in basic financial concepts, starting in schools". Recommendation 4.2.1.2: "Educate investors as to how capital markets operate, and the characteristics of different investment structures (UCITs v direct shareholdings, equity v debt, etc)". Recommendation 4.2.1.3: "Educate investors in dealing with different financial advisers (banks, fund managers, independent financial advisers, etc)". Recommendation 4.2.1.4: "Support investors' organisations in the provision of best practice and education programmes (e.g. fundamental analysis of company shares, mock-up investments for practice)".

688 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 4.1.

689 For education provided by financial firms in the US, see Fanto JA (1998c) pp 142–143: "In sum, education is a form of financial firm product advertisement, but, as in most advertising, it benefits both firms and consumers."

690 Regulation (EU) 2020/1503 of the European Parliament and of the Council of 7 October 2020 on European crowdfunding service providers for business, and amending Regulation (EU) 2017/1129 and Directive (EU) 2019/1937.

late their ability to bear losses.[691] This is complemented by a Key Investment Information Sheet (KIIS).[692] Drawn up by the project owner for each crowdfunding offer but with the crowdfunding service provider in many ways responsible for its contents, the Key Investment Information Sheet contains warnings.

How can the difference between the approaches adopted in the EU and the US be explained? In practice, the choice between the two approaches is a question of whether regulators should empower retail investors and to what extent regulators should regulate the financial industry. While political leanings obviously might play a role in choosing between different alternatives, the difference seems to be connected to the pension system and social security in general and embedded in different societal cultures.

In the US, state pensions are not expected to provide a full retirement income for large parts of the population.[693] This makes it necessary for retail investors to invest in stocks or funds. Moreover, employers have moved from offering employees "defined contribution" pension plans to offering "defined benefit" pension plans.[694] Retail investors need education, because they are responsible for their own pensions. Mere disclosures are not regarded as sufficient for this purpose.[695] Moreover, parents must save for the education of children and the nursing of grandparents.[696] American culture favours individual responsibility.[697]

In contrast, state and occupational pensions and social security in general play a bigger role in the EU. Rather than educating retail investors, the European Commission's approach is to rely on disclosure obligations and treat recommendations as a business.[698] For example, investment recommendations fall within the scope of the Market Abuse Regulation[699] and investment advice is treated as a professional activity regulated by MiFID II.[700]

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691 Article 21 of Regulation (EU) 2020/1503 (ECSP Regulation).

692 Article 23 of Regulation (EU) 2020/1503 (ECSP Regulation).

693 See, for example, Fanto JA (1998c) p 107.

694 *Ibid.*, pp 108 – 109 and 115. For defined benefit and defined contribution plans, see also World Bank (1994) pp 83 – 84; Group of Thirty (2019) pp xviii – xix and 59.

695 Fanto JA (1998c) pp 15 – 16.

696 *Ibid.*, p 112.

697 *Ibid.*, p 119.

698 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 4.1.

699 Points (34) and (35) of Article 3(1) of Regulation 596/2014 (Market Abuse Regulation) defining "information recommending or suggesting an investment strategy" and "investment recommendations", respectively. For the disclosure of recommendations in the media, see Article 21 of of Regulation 596/2014 (Market Abuse Regulation).

To empower retail investors, one of the first steps obviously should be to educate them. Financial intermediaries may not be the best source of financial education as the goal of financial intermediaries is to sell products.[701]

To reduce retail investors' dependency on financial intermediaries and to facilitate retail investors' direct investment in shares, retail investors might benefit from independent providers of financial education such as the state, regulatory authorities, labour unions, NGOs, and schools. This would even make it easier to achieve economies of scale and improve the quality of financial education for most people. Socialising the costs of financial education should perhaps be less controversial in the light of the fact that it is customary to socialise the costs of education because of societal benefits or positive externalities.[702]

Open access digital information can make it easier to educate retail investors. It is commonplace to employ digital technology in teaching and education. Moreover, digitalisation makes it possible to provide more personalised education at lower cost. There are already proposals on what kind of education is necessary to ensure greater financial literacy.[703]

More useful disclosures of financial information. In addition to education, retail investors need useful information to be able to take rational investment decisions.

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700 Point 5 of Section A of Annex I to of Directive 2014/65/EU (MiFID II); point (4) of Article 4(1) of Directive 2014/65/EU (MiFID II) defining "investment advice"; recitals 70 and 73 of Directive 2014/65/EU (MiFID II).

701 See, for example, Articles 24(4), 24(7) and 25 of Directive 2014/65/EU (MiFID II).

702 For higher education, see, for example, the 1997 UNESCO Recommendation concerning the Status of Higher-Education Teaching Personnel.

703 See, for example, Group of Thirty (2019) pp 61–62: "Specific responses to the need for greater financial literacy could include: • Initiating broad-based public and stakeholder education, mandated through multiple channels, such as: – Providing and/or mandating financial 'health screening' checks at key life stages such as age thresholds, changes in work status, retirement, and at regular intervals in retirement – Strengthening the financial advisory framework, with appropriate safeguards to restore public and customer trust, to enable industry to resume advising with confidence – Introducing refinements on the spectrum from compulsion to facilitation in private savings, for example, bundling education and advice into prompts triggered by events such as taking a job, entering auto-enrolment schemes, buying property, or retiring · Providing clear guidance on the principles of asset allocation and risk management through various channels such as schools, libraries, public agencies, and industry product disclosures · Building aspects of professional wealth manager functionality into retail investor products and funds, and at lower price points, through automation and so-called 'robo-advice' · Ensuring the industry has clear regulatory guidance on fiduciary requirements in the provision of customer advice and the marketing and selling of financial products and services."

The development of financial disclosures is closely connected to common law countries. Mandatory disclosures to the public were chosen as one of the cornerstones of the regulatory culture in English company law and US securities law (section 2.4.7).[704] Public disclosures and the market for corporate control belong to the most characteristic corporate governance tools of the American capital market.[705]

Issuer disclosures facilitate price formation.[706] According to economic theory, "[e]very piece of information about the value of a firm is relevant for pricing its shares".[707] At least some issuer disclosures are thus necessary.

However, all corporate disclosures are not useful for retail investors. There is plenty of anecdotal evidence. In 1940, Charlie Merrill, the founder of Merrill Lynch, summed up the problem as follows: "I have seen very few balance sheets on any Wall Street house that I, personally, could understand. Now, that is probably because I am a dumb bunny, but, by George, if I can't understand reading an ordinary statement of an ordinary firm in thirty minutes, why should we assume that any customer can understand a statement glancing at it for five minutes?"[708] In 2018, a columnist for The Economist, a newspaper, wrote that "GE's flow of financial information has become fantastically muddled. There is lots of it about (some 200 pages are released each quarter) and it is audited by KPMG. But it offers volume and ambiguity instead of brevity and clarity."[709]

Much of the information disclosed to the public is noise. Many investment decisions are driven by noise rather than information.[710]

Retail investors have problems where the regulatory framework requires the disclosure of information relating to many issues, the disclosure of detailed information, and the making of disclosures often. Not only is it difficult for retail investors to track company disclosures in many companies on an ongoing basis and analyse them. Frequent disclosures increase noise and make it even more difficult for retail investors to understand the relevance of what is being disclosed.[711] Only market participants with sufficient resources can follow such dis-

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704 See Kuhn AK (1912) pp 98–99; sections 80, 82 and 85 of the Companies (Consolidation) Act 1908; SEC (1936) pp 1–2.

705 For the market for corporate control, see Manne HG (1965).

706 See, for example, Article 17(1) of Regulation 596/2014 (Market Abuse Regulation) on the disclosure of inside information.

707 Holmström B (2015) p 7.

708 Smith WH Jr (2013) p 148 citing Charlie Merrill, the founder of Merrill Lynch.

709 The Economist, Schumpeter. The Fog of War, 27 January 2018.

710 Black F (1986); Shleifer A, Summers LH (1990).

711 See Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Shearman & Sterling LLP dated 31 August 2016: "We continue to believe that

closures and understand them. The large scope, high intensity, and large number of disclosures is designed to benefit technology-heavy traders.

Moreover, noise reduces the value of disclosures as a corporate covernance tool. Hopt has observed that "[d]isclosure and auditing are considered by academics as well as legislators to be the cornerstones of corporate governance. Surprisingly enough, the American corporate governance discussion in academia (not in practice) tends to neglect disclosure and auditing as major means of corporate governance."[712] It is perhaps less surprising if most disclosures just increase noise (even according to theory) but require extensive compliance work (done in practice). Practitioners believe that companies disclose too much just to reduce the liability of its board members and managers.[713]

Sometimes transparency is reduced when disclosure duties are increased. High-frequency trading is an extreme example of how increased disclosures can create a market with one-sided transparency (section 3.4.2).

Disclosures should be modified to be more useful for retail investors. Contrary to the long-term trend, disclosures should be simplified.[714] One can focus on the content (such as the use of narrative reporting) or the disclosure channel (such as social media) or both.

Simplify accounting disclosures, use a principles-based approach, narrative reporting and social media. Accounting disclosures cannot be simplified to such an

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the Commission should consider the following three key developments, in evaluating any changes to the current disclosure regime:

- Availability of Information. The internet has made vast amounts of reliable information freely available to investors.
- Instantaneous Communications. Ongoing technological change continues to increase the speed and ease at which information is disseminated to the public.
- Institutionalization of Stock Ownership. Institutional investors are exerting significantly more influence over U.S. public companies …"

712 Hopt KJ (2019a) III.1(b).

713 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Fenwick & West LLP dated 1 August 2016; letter of Davis Polk & Wardwell LLP dated 22 July 2016.

714 This was not yet recognised as a design principle in recital 83 of Regulation 2017/1129 (Prospectus Regulation): "In exercising its delegated and implementing powers in accordance with this Regulation, the Commission should respect the following principles: – the need to ensure confidence in financial markets among retail investors and SMEs by promoting high standards of transparency in financial markets, … – the need to provide investors with a wide range of competing investment opportunities and a level of disclosure and protection tailored to their circumstances, … – the need to ensure coherence with other Union law in the same area, as imbalances in information and a lack of transparency might jeopardise the operation of the markets and above all harm consumers and small investors."

extent that they cease to provide a true and fair view. The question is how accounting disclosures could be simplified for listed companies.

Reducing the level of detail might not necessarity be in the interests of retail investors. Accounting disclosures should fulfil the information needs of professional investors and intermediaries that have the knowledge and resources to follow and analyse disclosures. Unsophisticated investors tend to follow the market behaviour of professional investors and intermediaries and rely on their signalling and advice. Reducing the quality of accounting disclosures might, therefore, harm retail investors directly or indirectly.

Moreover, an accounting disclosure system for listed companies will always be perceived as "large" at the firm level. The regulatory framework is large, because it is designed for many kinds of investors, issuers, and industries. A broad range of data is necessary to cover all or most needs. Since the regulatory framework is not designed for any particular issuer, many rules might be regarded as superfluous at the level of a particular firm (compare section 6.4.5 on classification).

Reducing timeliness might not be in the interests of retail investors. Again, retail investors rely on professional investors and intermediaries. Large professional investors and intermediaries may have better access to undisclosed information and better resources to analyse undisclosed data. Smaller professional investors and intermediaries may not have the same opportunities. This said, replacing quarterly disclosures with half-yearly disclosures would reduce compliance costs for issuers.

Regulators could at least adopt the principles-based approach. Large auditing firms and law firms generally recommend the adoption of a principles-based approach with clearly established objectives. A principles-based approach could, first, reduce the amount of boilerplate information and/or information that may not be relevant for users and, second, provide for tailorable disclosures depending on the users' information needs.[715] Auditing firms and law firms have also proposed disclosure characteristics for the SEC to consider when developing principles for a modernised disclosure regime.[716]

715 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Grant Thornton LLP dated 21 July 2016; letter of KPMG LLP dated 21 July 2016; letter of Ernst & Young LLP dated 21 July 2016; letter of BDO USA, LLP dated 20 July 2016; letter of Deloitte & Touche LLP dated 15 July 2016; letter of Shearman & Sterling LLP dated 31 August 2016; letter of Davis Polk & Wardwell LLP dated 22 July 2016; letter of Fenwick & West LLP dated 1 August 2016.

716 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Deloitte & Touche LLP dated 15 July 2016: "Accordingly, we identified five disclo-

Moreover, regulators could require narrative reporting. Strampelli summed up the benefits of narrative reporting as follows: "Empirical evidence and the literature on the US MD&A and the UK Strategic Report show that a short narrative report written in non-technical language that focuses on essential aspects of the company's business and conditions could represent a useful tool in rendering issuers' financial reports more readable by retail investors and limiting potential information overload."[717]

A principles-based approach and increased use of narrative reporting would even make it easier to use new reporting channels such as social media for more timely and useful disclosures. Unlike traditional disclosure channels, social media is a form of pushing information rather than pulling information. Pulling information means that members of the public must find out whether the issuer has disclosed something. Pushing information means that the company discloses information to anybody who has chosen to follow the company. Pushing information can reduce information asymmetries.[718]

To sum up, this means in practice five things. First, regulators should reduce overreliance on disclosures. They should focus more on structural measures such as creating long-termism (section 6.3.11) and building mutual trust (section 6.3.12). Second, the existing accounting disclosure system should not be made worse. Third, regulators could adopt the principles-based approach for accounting disclosures. Fourth, to simplify accounting disclosures for the benefit of retail investors, the existing accounting disclosure system could be complemented by disclosures that retail investors can understand. Increased use of narrative reporting has been suggested as the answer. Fifth, the operational costs of disclosures should be reduced and retail investors' access to disclosures should be increased by facilitating the use of social media for disclosures (see below).

Use social media. Already in 2013, the SEC made clear that companies can use social media outlets like Facebook and Twitter to announce key information in compliance with Regulation Fair Disclosure (Regulation FD) so long as investors have been alerted about which social media will be used to disseminate such information.[719] The SEC made this clear in a report relating to Netflix.[720]

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sure characteristics for the SEC to consider as it develops principles to underlie a modernized disclosure regime – context, comparability, focus, flexibility, and credibility."

717 Strampelli G (2018) p 573.

718 Paul T (2015).

719 SEC Says Social Media OK for Company Announcements if Investors Are Alerted. SEC press release 2013–51 of April 2, 2013.

720 SEC Release No. 34–69279 (April 2, 2013) (Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: Netflix, Inc., and Reed Hastings): "Recently the Securities

In 2016, the SEC published a concept release on modernising certain business and financial disclosure requirements in Regulation S-K.[721] The SEC made the following initial observations:

- "The purpose of corporate disclosure is to provide investors with information they need to make informed investment and voting decisions."
- "Markets are composed of a broad spectrum of investors with different information needs."
- "There are potential drawbacks associated with disclosure requirements."
- "The appropriate choice of disclosure requirements therefore involves certain tradeoffs."
- "The trade-off between the benefits and costs of disclosure requirements may vary across different types of registrants."[722]

Commentators pointed out that companies communicate with investors in different ways. In practice, there are two channels of communication, namely the channels required for SEC disclosures and communications outside the SEC disclosure regime. The latter may often be more frequent and innovative.[723] Investors seem to expect "more current and forward-looking financial information as well as different ways to measure company performance."[724] In their comments, Congress members argued that "[t]he information provided on company websites and in financial disclosures is not and has not been sufficient to address the needs of investors".[725]

Moreover, commentators pointed out that different user groups may have different information needs. A law firm distinguished between the information needs of retail investors and institutional investors: "[W]e believe many issuers feel an obligation to disclose to the lowest common denominator despite the

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and Exchange Commission's decided to let companies and executives use social media sites like Twitter and Facebook to broadcast market-moving news is a huge step ahead and an irreversible move from market makers admitting the importance of social media trading. This alone is now the rule and in fact constitutes a big opportunity for traders to use new extra real time info and social media platforms to improve capital markets signals, sentiments in their ongoing daily activities."

721 SEC Release No. 33–10064, 34–77599 (April 13, 2016) (Concept Release on Business and Financial Disclosure Required by Regulation S-K).

722 *Ibid.*, Section II.B.

723 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Deloitte & Touche LLP dated 15 July 2016.

724 *Ibid.*

725 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Congress members dated 20 July 2016.

fact that the overwhelming consumers of SEC disclosures are institutional investors, professional investment managers, and research analysts. While individual investors may participate directly in the markets and may access SEC disclosure, they have little impact on offering and trading prices and often rely on third parties to digest and analyze company disclosures."[726]

The question therefore is whether to focus on the information needs of retail investors or institutional investors. One alternative could be to focus on the information needs of institutional investors, permit selective disclosures to institutional investors, and let retail investors benefit from freely available online analyses.[727] However, this alternative is not designed to increase retail investors' direct equity investments. To reach this goal, a retail investor orientation, social media as a new disclosure channel, and fintech with new advice engines might help.

Advice engines. In the past, the presence of significant information and transaction costs made it rational for retail investors to turn to financial intermediaries and invest in mutual funds. This outcome was explained with the classic "separation" theorem of portfolio theory.[728] But markets have changed.

Today, transaction costs have partly been brought down by technological advancement that has allowed retail investors to invest in increasingly advanced products.[729] But financial intermediation brings its own costs. Retail investors face an information-asymmetry problem when choosing between the wide range of available financial services and products, and a principal-agent problem when using them.[730] Transaction costs are increased by noise.[731]

In the future, technological advancement can bring Internet-based financial advice engines to replace the services of traditional intermediaries: "The availa-

726 Comments on Concept Release: Business and Financial Disclosure Required by Regulation S-K. Letter of Shearman & Sterling LLP dated 31 August 2016.

727 See *ibid*.

728 Merton RC, Bodie Z (2005) p 7: "[I]n the presence of significant information and transaction costs, the separation theorem turns into an elementary theory of financial intermediation through mutual funds."

729 Fanto JA (1998c) p 117.

730 Merton RC, Bodie Z (2005) pp 8–9: "However, the creation of all these alternatives combined with the deregulation that made them possible has consequences: deep and wide-ranging disaggregation has left households with the responsibility for making important and technically complex micro-financial decisions involving risk—such as detailed asset allocation and estimates of the optimal level of life-cycle saving for retirement—decisions that they had *not* had to make *in the past*, are *not* trained to make *in the present*, and are *unlikely* to execute efficiently *in the future*, even with attempts at education."

731 Black F (1986); Shleifer A, Summers LH (1990).

bility of financial advice over the Internet at low cost may help to address some of the information-asymmetry problems for households with respect to commodity-like products for which the quality of performance promised is easily verified."[732]

Some financial advice engines are already available. At one end of the scale, they are traditional. At the other end of the scale, there are social trading platforms such as eToro.[733] For an educated investor, online filtering or ranking tools may be functional equivalents to financial advice engines.[734]

Moreover, fintech can be expected to provide digital solutions to improve the quality of knowing-your-customer[735] efforts and investment advice,[736] and may help to address the agency problem.[737] Digital technology can help to create high-quality personalised advice based on the use of big data, the transparency of individuals in digital society, low costs per user after the upfront development costs, and the platform business model with positive network effects. United Capital Financial Advisors and Betterment are examples of new kinds of wealth-management firms and advisers.[738]

Nudging retail investors to take more rational decisions. Generally, retail investors can be nudged to take more rational decisions.

First, access to sophisticated financial management can be improved by the emergence of robo-advisers. They can even force traditional advisers to adapt.[739]

Second, robo-advisers can help to reduce biased decision-making. Investors have a well-known tendency to show decision inertia, that is, to suffer from bias-

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732 Merton RC, Bodie Z (2005) pp 8–9.

733 Stephen Marshal, Social trading platform in Israel raises money to develop blockchain technology. Times of Israel blog, 22 February 2019; Pan W, Altshuler Y, Pentland A (2012).

734 See recital 21 of Regulation (EU) 2020/1503 (ECSP Regulation): "The existence of filtering tools on a crowdfunding platform under this Regulation should not be regarded as investment advice under Directive 2014/65/EU as long as those tools provide information to clients in a neutral manner that does not constitute a recommendation. Such tools should include those that display results based on criteria relating to purely objective product features."

735 See Arner DW, Zetzsche DA, Buckley RP, Barberis JN (2019).

736 Philippon T (2020); Accenture (2014). For financial adviser misconduct, see Egan M, Matvos G, Seru A (2017).

737 Merton RC, Bodie Z (2005) pp 8–9: "However, the Internet does not solve the 'principal–agent' problem with respect to more fundamental financial advice dispensed by an agent."

738 United Capital Financial Advisors, a wealth-management firm based in California, was taken over by Goldman Sachs for $750 m in cash in May 2019. The Economist, Chubby cats, 25 May 2019. See also The Economist, For the money, not the few, 21 December 2019.

739 World Economic Forum (2015) p 19; European Commission (2018) pp 24–25, section 5 pp 81–96 and graph 39 on p 128; The Economist, For the money, not the few, 21 December 2019.

es in their decision-making.[740] There are several experimental studies on the beneficial effects of choice architecture.[741] This said, robo-advisers may have recommended different things in different countries.[742]

Third, AI can be used to spot red flags that should matter to retail investors. AI could possibly help to identify pyramid schemes (Ponzi schemes) and other suspicious transactions[743] as well as unfair commercial practices and misleading advertising.[744]

Create a new marketplace and a new company form. In the past, new company forms have been invented to cater for various societal needs: the needs of policy, firms, and investors (section 2.4.9). For example, societal needs explain the codification of limited liability in the French Code de commerce of 1807 and the creation of the GmbH in the German GmbH Act of 1892. Moreover, the function of the legal framework of marketplaces has been to increase trust and avoid lemon markets.[745]

To make it easier for retail investors to make direct equity investments in SMEs and growth firms, an alternative could be to design a new kind of marketplace (section 6.4.13 and Chapter 8) and a new company form (section 6.4.14 and Chapter 9) for this purpose. A new company law statute with its characteristic mandatory provisions could make it easier for retail investors to spot companies with particular characteristics. A tailor-made company form could help to balance the interests of the firm and its various stakeholders and create an alternative ecosystem for public equity for SMEs.[746]

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740 See, for example, Kahneman D (2011); Merton RC, Bodie Z (2005) p 9; Brenncke M (2018).
741 See Achtziger A, Alós-Ferrer C (2014); Jung D (2018).
742 European Commission (2018) p 33: “Overall, robo-advisors recommended relatively similar products across investment profiles and Member States. ETFs are by far the most commonly recommended products, followed by mixed funds, which are only common in Spain, the UK and Germany. France is once again an exception in terms of products offered, since the vast majority of products offered by robo-advisors are life insurance products. While the transparency in terms of types of ETFs allocated greatly varies between robo-advisors, they allocate a larger share of bond ETFs to a risk-adverse profile (profile A) while the share of equity ETFs increases for more risk-seeking investors (profile B).”
743 See, for example, Camilla Hodgson, Anatomy of a cryptocyrrency scam. Financial Times, Alphaville, 21 February 2019.
744 For misleading advertising, see also Directive 2005/29/EC (UCPD), Directive 2006/114/EC and European Commission (2018) p 113.
745 Akerlof GA (1970) on lemon markets.
746 See even OECD (2015c) p 27: “Creating the right ecosystem for public equity for SMEs will also support the development of other, non-traditional SME equity instruments such as equity private placements, equity crowdfunding, listed funds (with potential co-funding and risk sharing between the private and public sectors), and corporate venturing.”

Conclusion. More can be done to make it easier for retail investors to take rational investment decisions. Issuer disclosures should be designed primarily for the needs of retail investors. Where laws protect investors as a class or the typical investor, investor education should be improved. Nudging and fintech can help.

6.4.11 Focus on the Incentives of Controlling Shareholders and Retail Investors

From the perspective of the firm, the firm can be regarded as the principal of the principal-agent theory and shareholders as its agents.[747]

The firm should reward shareholders only when and to the extent that it is in the interests of the firm to do so. In the words of Adam Smith: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."[748]

Moreover, shareholders should be given proper incentives aligned with the interests of the firm. The interests of the firm are connected to the function of shareholders as (sometimes) sources of cash or non-cash assets and (always) providers of ancillary services. The choice of incentives should depend on the class of shareholders as shareholders are different and can have different functions for the firm.

What this also means is that shareholder protection laws should work well for the firm rather than provide for "strong" shareholder protection. Whether shareholder protection laws are reasonably strong should depend directly on the interests of the firm (as the principal) and only indirectly on the interests of shareholders (as the agents of the firm). There will be no vibrant stock markets without firms that choose to have publicly-traded shares.[749]

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747 Mäntysaari P (2010a) section 8.2.5; Mäntysaari P (2012) section 7.3. In contrast, the starting point of Jensen MC, Meckling WH (1976) is that: the firm is only a network of fictive contracts; the firm really does not exist; shareholders exist; shareholders do not need to have any function whatsoever; and all shareholders share the same interests. The choice of a new principal and new agents means that agency costs may need to be redefined. For the agency costs of funding with the firm as the principal, see Mäntysaari P (2010c) section 2.4 pp 16 – 17.

748 Smith A (1776) Book I, Chapter I. Compare Berle AA (1968) p xxxv: "Why have stockholders? … Privilege to have income and a fragment of wealth without a corresponding duty to work for it cannot be justified unless most members of the community share it."

749 For a different starting point, see Gilson RJ, Hansmann H, Pargendler M (2011) p 477: "[A]n effective capital market … requires a substantial and effective legal infrastructure to protect the interests of minority shareholders in publicly traded business corporations." Footnote 2: "Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, in particular, have

A growth firm customarily has a controlling shareholder or joint controlling shareholders such as the founders of the company, an entrepreneur, a controlling family, a venture capital fund, or a parent company.

Controlling shareholders have a combination of de facto and legal powers. Legal powers are connected to the formal allocation of power in the company and who in the legal sense is regarded as the party that acts as or on behalf of the company. De facto powers exist as a matter of fact.

Controlling shareholders are thus important agents of the firm.[750] The fate of the firm depends on decisions taken by the controlling shareholder or shareholders. Shareholders and the share ownership structure matter. For example, concentrated share ownership tends to foster innovation.[751] One way or another, good controlling shareholders should be remunerated for the ancillary services that they supply to the firm.[752]

The interests of controlling shareholders matter a great deal both to the firm and to retail investors. There will be no shares issued to retail investors unless controlling shareholders say so. Applying the principal-agent theory, retail investors and minority shareholders rely on controlling shareholders as their agents.[753]

In the past, the different functions of shareholders have been facilitated by different company forms such as partnerships, limited partnerships, and limited-liability companies (sections 2.4.3, 2.4.5 and 2.4.9). The different functions of shareholders have also been facilitated in corporate practice. Shareholders had different functions in the Dutch East India Company (VOC) (section 2.4.10) and still have different functions under the terms of venture capital contracts (section 6.3.14). Moreover, the use of multiple classes of shares can reflect the different functions of different shareholders.[754]

If facilitating retail investors' direct investment in growth companies is chosen as a strategic design principle (section 6.3.4), company and securities law should make it more appealing to controlling shareholders.

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sought to make the case that, as an empirical matter, strong shareholder protection laws are an important prerequisite for vibrant capital markets and, perhaps, overall economic development." With this starting point, the number of listed companies has remained low.

750 Mäntysaari P (2010a) sections 9.2.6 and 9.4.

751 For the potential benefits of concentrated share ownership, see *ibid*., Mäntysaari P (2012) Chapter 9; Belloc F (2012); Gonzales-Bustos JB, Hernández-Lara AB (2016); Asensio-López D, Cabeza-García L, González-Álvarez N (2019).

752 Mäntysaari P (2010a) sections 8.7.6 and 9.2.6.

753 *Ibid*., section 9.5.3.

754 For the function of founders, see even Hill J (2021) section 2.1 p 20.

Retail investors need proper incentives as well. In order to reduce the risk exposure of retail investors, retail investors should be protected against risks inherent in the agency relationship between retail investors and controlling shareholders and risks inherent in the agency relationship between retail investors and management, in addition to risks inherent in their own decision-making process (bad investment decisions). A reduction in their actual and perceived risks is necessary for the direct investment regime to work.

In the past, retail investors have benefited from the equal treatment of shareholders (meaning that they have to some extent received the same benefits as controlling shareholders), the transferability of shares (meaning that they may have had a chance to sell their shares), mechanisms addressing the liquidity of shares (section 6.3.13), and, in the EU, the legal capital regime (meaning that shareholders in general meeting decide on many transactions that influence shares).[755]

One may ask to what extent retail investors need control rights under company law. One of the reasons for the separation of powers in the company is the fact that retail investors are not good monitors (section 2.4.5). In the practice of investment funds, financial investors do not really have control rights (section 5.3.2).[756] Combined with the availability of various legal forms to organise an investment fund, "[t]his pattern suggests that limits on control are desirable for their own sake, and not merely as instruments for achieving limited liability".[757]

Controlling shareholders and retail investors have their own subjective interests in each case. Company law obviously cannot protect whatever interests. Company law should protect interests that are aligned with the interests of the firm.

Consequently, it would be necessary for company and securities law to: facilitate the provision of the ancillary services of controlling shareholders; ensure that the legal and de facto powers of controlling shareholders are used in the long-term interests of the firm; reduce the actual and perceived risks of retail investors; ensure that retail investors can to a sufficient extent share the benefits of controlling shareholders; limit the control rights of small shareholders; and prevent abuse.

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755 See Mäntysaari P (2010c) sections 5.3 and 5.4; Bebchuk LA (2005).

756 Morley J (2014) pp 1245 and 1248.

757 *Ibid.*, pp 1275–1276.

6.4.12 Develop SME Exchanges

One size does not fit all.[758] Much of the earlier regulation of stock exchanges has focused on the interests of institutional investors. The regulatory framework has mainly been designed with large issuers in mind. Like in company law that introduced different limited-liability company forms for different kinds of firms (section 2.4.9), it is understood that there should be different exchanges or market segments for large and small issuers (section 6.3.13).

In the EU, SME growth markets were introduced by MiFID II to provide a stepping-stone for new companies to prepare for a listing on a larger exchange.[759] The Commission mentioned SME exchanges in its Capital Markets Union action plan: "The Commission will review the regulatory barriers to small firms for their admission to trading on public markets and work closely with the new SME growth markets under MiFID II to ensure that the regulatory environment for these incubator markets is fit for purpose." The problems that the Commission mentioned in its action plan included high initial listing costs, high prospectus costs, poor information, and low liquidity.[760]

At the end of the day, SME exchanges and other small markets need attractive stocks.[761] Attractive stocks could help to attract more quality capital to the marketplace and build up an equity culture in the countries that lack one. Changes in the regulatory framework could help (section 5.4).[762]

Unfortunately, retail investors' direct share ownership is hampered by powerful trends. The funding practices of attractive growth firms tend to exclude public markets or postpone IPOs (sections 5.2 and 5.3).[763] If this is the case, tinkering with traditional SME exchanges may not be enough to increase public share ownership. Equity crowdfunding does not seem to be the answer (Chapter 7). More powerful measures are required to change the trend. Therefore, we

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758 This is now part of SEC policy. Clayton J (2019).

759 SME growth markets are defined in point 12 of Article 4(1) of Directive 2014/65/EU (MiFID II).

760 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 2.

761 See FESE (2019) p 30.

762 FESE (2019) pp 30–31. A FESE group indentified four key areas for the development of smaller markets within the CMU: "1. Ensure a coordinated development of ecosystems by facilitating market convergence and benefitting from an EU integrated diversity of national ecosystems. 2. Deliver a proportionate regulatory framework ... 3. Protect smaller markets ... 4. Develop an equity culture in Europe for both investors (retail and institutional) and entrepreneurs."

763 See, for example, Richard Waters and Nicole Bullock, Dropbox shares jump 36 per cent on debut. Financial Times, 24 March 2018.

will focus on microexchanges as a potential way to create more companies with publicly-traded shares (section 6.4.13).

6.4.13 Create Microexchanges

Exchanges are said to play a central role in price formation, risk management, and maintaining and managing listing requirements.[764] However, there should be room for financial innovation and solutions that can compete against traditional stock exchanges and the current alternative trading systems.

We propose the development of microexchanges. The microexchange proposal serves two purposes here. On one hand, this rather extreme idea could perhaps help to see things in a new light and contribute to incremental improvements of existing market regulation. On the other, the proposed microexchange could even be made to happen.

The proposed microexchange is an incorporated non-profit exchange belonging to the issuer as the sole shareholder. Each microexchange is intended for trading in the shares of one company only.

The functions of such a microexchange would be simple and primarily limited to providing liquidity as a secondary market.[765] In current market practice, technology firms go public in order to provide liquidity. They raise funding in other ways.[766]

Microexchanges could provide an exit channel for early investors and an earlier investment channel for retail investors.[767] The development of microexchanges could thus help to combine SMEs with retail investors and at the same time benefit angels, accelerators, and other early investors.

764 FESE (2019) p 14.

765 Compare Coyle JF, Green JM (2014) p 168 on SAFEs: "Levy spent several months trying to develop a contract that was 'creative' and 'disruptive.' After several months of trying to think of something totally new and different, however, she ultimately came to the conclusion that 'simplifying was a better approach than radical change. The community was more likely to accept something recognizable.'"

766 See, for example, Clayton J (2019); Richard Waters and Nicole Bullock, Dropbox shares jump 36 per cent on debut. Financial Times, 24 March 2018; The Economist, Schumpeter, Life in the public eye, 22 April 2017.

767 The European Commission has told that it is "interested to know whether measures can be taken to create a better environment for business angels, venture capital and initial public offerings to ensure better exit strategies for investors and boost the supply of venture capital to start-ups." Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, section 4.2, pp 16–18.

The development of microexchanges could benefit equity crowdfunding platforms. Equity crowdfunding is hampered by the lack of a secondary market. Because of the lack of secondary markets, equity crowdfunding has been limited to professional investors in some countries.

The availability of microexchanges could help to increase the number of companies with publicly-traded shares. A microexchange could work as a stepping-stone into traditional public markets by clearing the path for a future listing on an SME exchange or the main market.

To make it easy for issuers and to increase competition, the issuer should be able to choose between operating the microexchange itself or outsourcing the operation of the microexchange to a financial service provider.

Both small and large firms could benefit from an alternative way to organise the public trading of shares and an alternative corporate governance framework.[768] Moreover, the existence of alternative frameworks could make it easier for firms to prevail in competition. A more decentralised trading system might reduce systemic risk.[769]

In addition to the long-term trend of financial innovation, the trends that might favour such microexchanges include digitalisation, the emergence of platform economy, and gravitation towards a new balance between integration, outsourcing, and networks for each firm in digital economy.

Long-term financial innovation. Existing exchanges are not doing a very good job in the light of the fact that there are relatively few listed companies in the world. Almost all companies in the world are privately held. The current regulation of stock exchanges and public companies seems to have benefited the interests of stock exchange owners, traders, and institutional investors to the detriment of public markets and many firms.[770]

The relatively small number of public companies and the absence of a secondary market for the shares of private companies makes one ask whether there would be demand for new kinds of marketplaces.[771]

Now, there is a long-term pattern of financial products initially offered by intermediaries ultimately moving to markets. This pattern is powered by technolog-

768 OECD (2015c) p 122: “Angel investing benefits from an integrated and well-functioning financial system, which allows profitable exit to take place ...”

769 See even *ibid.*, p 132 on the merits of the existence of separate platforms.

770 Macey JR, O’Hara M (2005) pp 581–582: “[R]ules that benefit the exchange as a firm may well be to the detriment of the market.”

771 See, for example, Hannah Kuchler, Silicon Valley start-ups: how to get ahead of the IPO. Financial Times, 9 January 2019.

ical advancement and a decline in transaction costs.[772] Stock exchanges as intermediaries probably are no exception. They seem to be natural targets for disruptive innovation.[773] The long-term pattern can thus be expected to be a driver of the emergence of new market structures.

Digitalisation has already contributed to the emergence of various kinds of alternative venues for trade execution (section 3.3). Trading has become a commodity.[774]

In the future, there will be new kinds of trading venues and service providers in stock markets. Such new trading venues might range from small issuer exchanges for the shares of many growth firms ("venture exchanges" proposed in the Main Street Growth Act)[775] to crowdfunding platforms with new functions (Chapter 7), social media, or other marketplaces.

Digitalisation and social media platforms. Digitalisation, technological advancement, and lower transaction costs have increased the number of alternative venues that compete against traditional stock exchanges (section 3.3).[776] Other markets have changed as well.

First, consumers increasingly prefer to do business online and are comfortable with installing and using digital applications in their own hand-held devices. Firms have adapted to changing consumer behaviour and the need to cut costs by digitalising sales and customer contacts. Traditional middlemen such as department stores or travel agents are in the process of being replaced by digital sales channels, platforms, and vertical integration.[777]

Second, the race to create positive network effects has changed the funding of start-ups and growth firms. Mega-funds prefer to load start-ups with capital to make them grow faster than their competitors. The emergence of mega-funds has evoked ecosystem responses such as the emergence of angel groups (with more capital to invest), accelerators that provide intensive mentoring (such as Y Combinator),[778] a variety of crowdfunding platforms, functional segmentation of the

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772 Merton RC, Bodie Z (2005) pp 14–15, citing Finnerty J (1988) and Finnerty J (1992).

773 See World Economic Forum (2015) p 13 synthesising "six high level insights on innovation in financial services".

774 Macey JR, O'Hara M (2005) p 564 and p 570: "The dramatic fall in the transaction costs associated with operating a trading venue has transformed the relationship among issuers, trading venues, and investors from a relationship business into a commodity business."

775 H.R. 5877, Main Street Growth Act.

776 Macey JR, O'Hara M (2005) p 565.

777 For the effects of MiFID II, see, for example, Hannah Murphy and Owen Walker, Mifid reforms spur companies seeking investors to bypass brokers. Financial Times, 20 May 2018.

778 In 2018, Dropbox became the first prominent company from Y Combinator to complete an IPO. For accelerators, see Hoffman DL, Radojevich-Kelley N (2012).

VC industry (with seed-stage venture capital and longer-term private equity), massive late-stage investments (by open-ended mutual funds and sovereign wealth funds), and Initial Coin Offerings (ICOs).[779]

In the long term, these trends can be expected to influence the organisation of public stock markets. There is room for financial innovation.

There are already new zero-commission or low-cost trading platforms. Some of them have chosen the mobile-first approach. Their apps may include features that customers feel familiar with and expect to see in a mobile product (section 5.6).[780]

A new way to balance vertical integration and outsourcing in corporate finance. Firms that need goods or services either organise production internally within the firm or buy the goods or services on the market. Firms take make-or-buy decisions in the ordinary course of business. They decide whether to do something internally, buy it from the market, or use business outsourcing as a way to combine some of the benefits of internal production and market contracting. The optimal choice depends on costs that even include transaction costs and agency costs.[781]

The operators of stock exchanges are financial firms. Their product is organising a market as a professional service.[782] Treating organising trading as a product and as a question of make or buy leads to further questions.

Basically, the organisation of trading in the company's shares should be a simple question of make or buy to the issuer-firm. However, companies have so far not been able to choose between make or buy as far as the operation of a marketplace for their shares is concerned. If they want their shares to be publicly traded, they must turn to a stock exchange and other middlemen in a market where regulation is rigged for the benefit of institutional investors and other financial intermediaries. This forced use of particular trading mechanisms is likely to reduce competition between providers of different trading mechanisms, increase costs for firms, and reduce both IPO levels and the numbers of companies with publicly-traded shares.

In the future, the legal framework should facilitate a "make-or-buy" decision: a new company form and new market regulation should make it possible for the firm to organise a marketplace for trading in its shares in the spirit of what Justice Brandeis called "corporate self-help".[783]

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779 Kenney M, Zysman J (2019).
780 Tenev V (2021), VI on the Robinhood app.
781 Coase RH (1937); Macey JR, O'Hara M (2005) p 567.
782 Köndgen J (1998) p 234; Schmidtchen D (1998); Mues J (1999).
783 Brandeis LD (1914) p 131.

The regulation of companies, stock exchanges, and securities markets has been adapted to technological advancement and market changes in the past. Issuer-owned microexchanges, complemented by the outsourcing of some functions from financial service providers, would perhaps be feasible in the technical sense thanks to the low cost of computing power, the development of fintech, and the widespread use of digital consumer applications. The challenge relates to regulation.

The traditional channels for equity and debt capital formation are being reshaped by alternative funding platforms. For example, "lenders and borrowers are able to connect directly through online platforms bypassing all types of intermediaries that are unable to justify their fees".[784] Alternative funding platforms have "attracted considerable venture investment, garnering over 40 % of VC capital in 2015, fuelled by the multi-trillion size of the addressable markets, the acceptance by millennials of the P2P model, and some of the largest bank/ fintech partnerships".[785] Moreover, "[t]here is a movement globally today by exchanges to ease access to private capital by bringing together capital providers, with new alternative funding technology to create a new network for the underserved SME".[786] Some fintech companies, banks, and operators of traditional stock exchanges could perhaps increase their revenue by selling technology and services to a large number of non-financial firms that currently do not find traditional stock exchanges attractive but could be interested in a microexchange designed with their own interests in mind.[787]

There are already new ways to organise trading in the shares of small private companies. For example, Equidate, Inc., a San Francisco-based company, was founded in early 2014 with the goal of providing liquidity for pre-IPO companies' shareholders that typically hold "restricted" shares. The SEC described Equidate's business model as follows:

"In broad economic terms, Equidate designed its structure to allow investors to purchase the rights to the economic upside or downside of an equity security, similar to the operation of a total return swap. Typically, Equidate Holdings en-

784 Deutsche Börse AG, Celent (2016) pp 15 – 16.
785 *Ibid.*
786 *Ibid.*
787 For trends in finance, see World Economic Forum (2015) p 174. See even The Economist, Margin call of the wild, 3 April 2021: "[B]anks are desperately searching for profits. Rules drafted after the global financial crisis make it expensive for Wall Street banks to trade on their own account … [I]nvestors mostly buy and sell stocks cheaply on electronic platforms. So Wall Street banks increasingly rely on fees and commissions from fast-trading hedge funds or family offices that act like hedge funds, such as Archegos."

tered into separate contracts with both the shareholder and the investor. The contract with the shareholder was called a Shareholder Note ('SHN'). The contract with the investor was called a Payment-Dependent Note ('PDN'). The contracts were designed to work together to transfer the potential economic return in a set of reference shares from the shareholder to the investor through [Equidate, Inc. and Equidate Holdings LLC], despite the payment obligations under both instruments being legally separate, and the investor not having a direct right to the shareholder's payment. In exchange for providing the potential economic return to the investors, the shareholder received an up-front cash payment from the investors via Equidate Holdings based on an agreed-upon price for the shares."[788] The proposed microexchange would work in a different way.

The particular characteristics of the context. If the objective is to increase the number of growth firms with publicly-traded shares, increase retail investors' direct investment in such shares, and facilitate the use of microexchanges for trading in the shares of one issuer only, the organisation of trading should be aligned with the chosen objectives and the characteristics of the context. The context of microexchanges has its own particular characteristics.

The shares of private companies and SMEs have lacked liquid secondary markets. Existing market practices such as venture capital have largely excluded retail investors in growth firms.[789] The proposed microexchanges are primarily intended for SMEs that are growth firms. SMEs tend to have a concentrated share ownership structure with one or more controlling shareholders. There can be employee shareholders. If SMEs have financial investors, control is often maintained by the use of multiple classes of shares with different voting rights.

Retail investors should not rely on microexchanges only. Retail investors generally need more direct investment alternatives for diversification purposes, but their investment portfolio should even include shares in large cap companies.

Moreover, companies using the proposed microexchange should not rely on retail investors as a source of cash. Funding can be raised through PIPE transac-

788 SEC Release Nos. 33–10262 and 34–79481 (December 6, 2016) (In the Matter of Equidate, Inc. and Equidate Holdings LLC, Respondents). See also Jessica Dye, Private share trading firm Equidate settlese SEC claims, Financial Times, 6 December 2016; Henny Sender and Leslie Hook, Airbnb attacks 'bottom feeder' sharks circling worker's shares. Financial Times, 14 August 2016.
789 See, for example, Richard Waters and Nicole Bullock, Dropbox shares jump 36 per cent on debut. Financial Times, 24 March 2018.

tions, and new investors can be a source of non-cash assets when the company uses its shares as a means of payment in mergers and acquisitions.

Characteristic issues. There are characteristic issues that should be addressed one way or another in the regulation of stock exchanges. It is necessary to address questions relating to market organisation, public market entry and exit, the trading mechanism, market integrity, and corporate governance. Therefore, it is necessary to ask:

- Who will make the rules? Generally, there must be rules.[790] It is not enough just to rely on laissez-faire or general freedom as the default rule.[791] Where an issuer may operate its own microexchange, it is necessary to rethink who will make the functional equivalent of listing rules, rules laying down continuous obligations, and trading rules.[792]
- How can the rules be enforced? Regulators should ensure the enforcement of rules and provide for sanctions for non-compliance. Where an issuer may operate its own microexchange, such rules should be made and enforced by public authorities.
- How can counterparty risk be reduced? Regulators should choose the corporate structure of the marketplace (such as a separate legal entity ring-fencing the exchange and market participants' assets), the counterparty (such as a central counterparty), clearing (by the central counterparty or a third party), and settlement (by the central counterparty or a third party).
- How can trading and the provision of liquidity be organised? It is necessary to address the inherent illiquidity of the shares of unlisted companies and small issuers.[793]
- How will bids be matched? What kinds of bids will be permitted? In the light of the inherent illiquidity of SME stocks, one must even choose between continuous trading and auctions.
- Is the market a primary market or just a secondary market?
- What are the conditions of entry to public markets and exit from public markets? In traditional markets these are questions of listing and delisting. It is necessary to choose the securities that can be accepted to trading on the new

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790 See Ostrom E (2005) p 188 and Ostrom E (2010) p 415 on the issues that need to be regulated. Ostrom E (2010) p 420 on the seven types of rules.

791 Ostrom E (2005) p 210 on general freedom as the default rule.

792 Macey JR, O'Hara M (2005) p 581: "Specifically, when and only when an exchange internalizes both the costs and the benefits of the rules it promulgates should it be entrusted with the task of self-regulation."

793 OECD (2015c) pp 130 – 131 and Box 7.5; Weild D, Kim E, Newport L (2013) p 12; Moloney N (2014) V.1.2.3, p 431.

kind of venue. Moreover, exit from public markets must be subject to conditions.
- What is the relationship to other trading venues? One may ask whether it should be necessary to prohibit the listing of securities on other exchanges. Moreover, there should be rules on the change of the trading venue.
- How can market integrity be ensured? For market integrity you need organisational measures relating to market structure, organisational measures relating to the governance of the issuer, and ongoing obligations for market participants.
- What should be the issuer's corporate governance model?
- Finally, in whose interests should one address these and other questions? When answering the questions, regulators should choose the primary interests that regulation should foster.[794]

Design principles. To address characteristic issues in a rational way, rulemakers would need design principles.[795] The choice of design principles depends on values.

We propose design principles in the light of the objectives of this book (section 6.2). The objective here is to reduce financial inequalities by increasing the number of growth firms with publicly-traded shares (section 6.3.6) and retail investors' direct equity investments (section 6.3.11).

When choosing design principles for the proposed microexchange, we can learn from past design principles applied in the regulation of stock exchanges (Chapter 3), companies (Chapter 2), and securities trading (Chapter 4), and from recent market practices (Chapter 5, sections 6.3.12 and 6.3.13).

The legal aspects of facilitating microexchanges will be discussed in greater detail in Chapter 8. We can nevertheless have a brief look at the potential design principles.

Easiness of use combined with protections. It should be easy for issuers and retail investors to use the microexchange. The easiness of use should nevertheless be combined with adequate protections. Regulatory compliance is an obvious challenge. Different interests must be balanced for this reason.

Mandatory provisions of law and enforcement by public authorities. The rules should be made by the state.

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794 Mäntysaari P (2010a) section 8.2.5, Mäntysaari P (2012) section 7.3.

795 For practical reasoning as a form of rational behaviour, see chapter 6 of Aristotle's Nicomachean Ethics. For law as a design science, see Mäntysaari P (2017).

First, microexchanges will not come into existence without a legal framework based on mandatory provisions of law. You need regulatory dualism to facilitate microexchanges. Moreover, only mandatory provisions of law can ensure the standardisation and legal certainty that are necessary before technology can be developed, the number of firms and investors using the technology increased, economies of scale reached, operational costs reduced, and the size of the market increased. In the future, there should be technology platforms that are to microexchanges and securities trading what Shopify is to e-commerce. Mere contractual innovation would not be enough in capital markets. Capital markets are heavily regulated.

Second, where the rules are made by the state, the rules can be enforced by public authorities. Enforcement by public authorities in serious cases could help to address the problem that retail investors and other small shareholders lack the resources and incentives to enforce sanctions against management, the controlling shareholders, or the company.

Third, mandatory provisions of law could reduce abuse and increase trust. The German Aktiengesetz is largely mandatory for this reason since the reforms of 1870 and 1884 (section 2.4.5). The EU has chosen a similar design principle for the digital economy as a whole.[796] In contrast, self-regulation and over-reliance on the freedom of contract would increase abuse and the risk of a market for lemons.

Fourth, where the legal framework is based on mandatory provisions of law, it would be easier for market participants to understand the legal framework of all microexchanges.

Finally, the use of mandatory provisions of law could increase choice and competition. The current model of market regulation has in practice limited choice. The current model consists of two main components, namely mandatory securities law that mainly has been designed with large companies and financial intermediaries in mind, and freedom of contract that mainly benefits market participants that have bargaining power. In securities law, it is customary to use one-size-fits-all or level-playing-field approaches that have reduced diversity and therefore even choice. Reliance on freedom of contract would not increase choice for retail investors and SME issuers. The existence of microexchanges would help to increase competition between different kinds of trading venues

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796 A Digital Single Market Strategy for Europe. Communication from the Commission, COM(2015) 192 final.

and technologies. The existence of different state legal frameworks with or without microexchanges would help to increase competition between states.[797]

Choice of interests. The regulation of microexchanges should primarily foster the interests of the firm. Microexchanges will not work in the long term unless they work for the firm.

To increase retail investors' direct equity investments, it is nevertheless necessary to take into account many other interests as well. The interests of founders, entrepreneurs, and controlling shareholders should be protected, because SMEs tend to be dependent on the services of such corporate insiders who even decide whether the company will enter public markets in the first place.

Market organisation. The problem of the inherent illiquidity of SME stocks should be addressed by market organisation.

Where the issuer is an SME with a concentrated share ownership structure, its shares are illiquid regardless of the choice of the trading venue. In private companies, the absence of a secondary market is an obvious problem for shareholders that want an exit. A stock exchange listing would create a secondary market and improve liquidity. However, it would obviously not completely cure the inherent illiquidity caused by the small number of the company's shares, the small number of its shareholders, and the company's concentrated share ownership structure.

The organisation of a microexchange should address the inherent illiquidity of the company's shares in four ways. First, the microexchange should primarily be designed as a secondary market.

Second, the trading mechanism should be adapted to the inherent illiquidity of SME stocks (see below).

Third, because of the inherent illiquidity of SME stocks, the choice of a microexchange should exclude trading in the same stock on other venues.[798] Neither the matching mechanism nor market making will work properly unless trading is concentrated to one venue. In addition to the regulation of exchanges and companies, better incentives to trade on the microexchange rather than bilaterally in the OTC market could be provided by tax laws.

Fourth, a retail investor should be able to view the microexchanges of multiple companies (different stocks traded on different microexchanges) in order to compare investments and trade. The increased number of stocks that an investor

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797 See also Romano R (1998) on a market approach to securities regulation.

798 In the US, the policy is to increase the number of venues for an issuer's shares. See, for example, SEC Release No. 34 – 85828 (May 10, 2019) (In the Matter of the Application of Long Term Stock Exchange, Inc. for Registration as a National Securities Exchange. Findings, Opinion, and Order of the Commission).

can view and compare simultaneously could increase interest in the trading technology as a whole and therefore even trading in each stock. This is not really a question of the organisation of a single microexchange as such. Microexchanges could be connected at the investor userface level by fintech. There is no lack of ambitious start-ups eager to become global rebundlers and superapps.[799]

A separate legal entity, a central counterparty, prudential requirements, authorisation. It is customary to take certain steps to reduce market participants' exposure to counterparty risk and systemic risk.

First, there should be a separate legal entity for the microexchange. The microexchange should be ring-fenced from the assets of the issuer and any third party by using a special purpose vehicle (SPV).[800] A separate legal entity would make it easier for the issuer to comply with rules on insider trading, market manipulation,[801] and the acquisition or sale of the issuer's own shares. To reduce costs, the SPV should belong to the issuer.

Second, there should be a central counterparty for the microexchange. The question is whether the legal entity that owns the microexchange should be able to operate it, that is, act as the central counterparty (CCP) and be responsible for clearing and settlement.

Third, there should be an authorisation requirement and prudential requirements for the operator of the exchange and the central counterparty. Prudential requirements should be adapted to microexchanges.

High prudential requirements do not seem necessary for the operator of the microexchange. Prudential requirements are employed to reduce systemic risk and to strengthen the resilience of the financial system. Where an exchange is designed for trading in the shares of one typically rather small company only, the exchange poses no systemic risk. Moreover, increasing the number of com-

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799 The Economist, Just dough it, 26 June 2021 (on Revolut).

800 For the structure of LTSE, see SEC Release No. 34–85828 (May 10, 2019), III.A: "LTSE Group, Inc. ('LTSEG'), a Delaware corporation, will own 100% of the equity of LTSE and is the entity through which the individual investors who are ultimate owners of the Exchange will hold their ownership interests in the Exchange. LTSEG will be the primary employer of all LTSE personnel. In addition, the stockholders who directly own LTSEG also will directly own a separate, affiliated Delaware-incorporated entity, LTSE Services, Inc. ('LTSE Services'), a software business currently serving approximately 20,000 users, mostly early stage companies. It is contemplated that the Exchange will maintain a commercial relationship with LTSE Services, seeking to leverage the company's technological expertise to support the Exchange's software needs."

801 See Article 8 (insider dealing) and Article 12 (market manipulation) of Regulation 596/2014 (Market Abuse Regulation).

panies with publicly-traded shares can increase the resilience of the financial system as a whole.

Microexchanges will not materialise if prudential requirements such as minimum capital requirements are high.

Fourth, it should be possible to outsource the function of compliance with prudential requirements by outsourcing the CCP and clearing house functions to a financial service provider. This could reduce the cost of regulatory compliance.

Fifth, there should be no margin requirements for investors on microexchanges.[802] The clearing house and the CCP should be defended in other ways. For example, risk can be reduced by the use of periodical auctions primarily designed for retail investors and small trades, and by the use of digital banking and electronic payments (see below).[803]

Liquidity, call auctions and market-making. The design principles for a microexchange should address the inherent illiquidity of SME stocks. Microexchanges would require the rethinking of liquidity. The interests of the issuer-firm are served by sufficient rather than maximal liquidity (section 8.7).

Microexchanges should be based on single price periodic call auctions (section 8.7.2)[804] supported by market making (section 8.7.3).[805] Block-trading should be limited. Moreover, liquidity should be protected by limiting public trading to the microexchange and prohibiting the public trading of the company's shares on other venues.[806] Public trading can be complemented by OTC markets.

The use of microexchanges would mean the separation of the equities market and the derivatives market for the stocks of individual issuers.[807] However, a derivatives market would not work for the stocks of individual issuers in the inherently illiquid SME stock markets. If there is demand for derivatives, any stock markets can be complemented by OTC derivatives markets.

802 For margin requirements, see recital 70 and Article 41(1) of Regulation 648/2012 (EMIR).

803 For clearing houses in capital markets, see The Economist, Flight to safety, 30 May 2019.

804 Comerton-Forde C, Rydge J (2006); Ibikunle G (2015) pp 209 and 225: "Since previous literature streams support the notion that the introduction of call auction enhances market quality, the past decade has seen the introduction of call auctions for closing and, in many cases, also the opening of trading venies across the world … Generally, the results in this study suggest that the influence of the call auction for opening the market might have been exaggerated and oversold to investors by platforms eager to please the markets."

805 FESE (2019) p 34.

806 See also FESE (2019) p 31 on the protection of smaller markets.

807 See Weild D, Kim E, Newport L (2013) p 11.

Public market entry and exit. There should be minimum requirements for issuers that may use a microexchange. It is also necessary to regulate transition from one venue to another or from public to private markets.

First, the microexchange should only be reserved for firms that have chosen a particular company form. We propose the use of a new company form that we call the small limited-liability company (section 6.4.14). This company form should facilitate the use of a microexchange and take into account the particular characteristics of the governance of growth firms and SMEs.

Second, in addition to requirements as to company form, there should be minimum requirements as to company capital, shares, and share ownership structure.

On traditional exchanges, it is necessary to ensure that only suitable issuers and securities can be admitted. This is achieved by listing rules. The absence of minimum requirements for issuers whose securities can be admitted to trading on the market could lead to a market for lemons[808] with increasingly lower issuer quality and increasing risk of abuse. Restricting access to trading has been described as a public good that benefits all.[809]

In the particular context of start-ups and growth firms, the shares of many issuers are very high-risk investments and not suitable for retail investors. For example, seed capital is a high-risk investment. There should, therefore, be minimum requirements (thresholds) for issuers that may use a microexchange.[810]

Third, size-related maximum thresholds should be avoided. The potential users of microexchanges could even include larger firms, as successful SMEs grow bigger. Maximum thresholds that must not be exceeded such as thresholds relating to maximum company size, capital, or market value would give perverse incentives to reduce growth.[811] Instead of such maximum thresholds, regulators could nudge large firms to move to regular markets by designing the microexchange for smaller growth firms and making transition to regular markets easy.

808 Akerlof GA (1970).

809 Macey JR, O'Hara M (2005) p 584.

810 For example, Finnest, an Austrian platform for SME funding, explained on its website in 2019 that Finnest focuses on SME companies with a proven track record and more than €10 million annual revenues rather than start-ups. In 2019, Finnest became part of Invesdor Group. In contrast, the proposed Main Street Growth Act of 2018 did not contain minimum requirements relating to company size, capital, shares, or share ownership structure. See the proposed Section 6(m)(8) of the Securities Exchange Act of 1934.

811 In contrast, the proposed Main Street Growth Act of 2018 restricted the size of issuers eligible for venture exchanges. See the proposed Section 6(m)(8) of the Securities Exchange Act of 1934.

Fourth, transition to regular markets such as an SME exchange or a main market should be made easy for the firm. Moreover, it would be necessary to regulate the exit of the issuer from public markets. It is necessary to protect investors in public market exits ("delistings").

Market integrity. Trading on a microexchange should fall within the scope of the market integrity regime that applies to securities trading generally.

SMEs and growth firms tend to have a concentrated share ownership structure and illiquid shares. This increases the risk of abuse. Controlling shareholders and corporate insiders may have an opportunity to abuse their powers to the detriment of retail investors. Market manipulation and insider trading by corporate insiders and financial speculators could make the market work worse for firms and retail investors.[812]

For these reasons, there should be a market integrity regime. Market integrity can be improved by applying the market integrity regime that applies to securities trading generally.

This said, the entire market integrity regime would not always be optimal for microexchanges. It could bring too heavy compliance obligations for issuers and corporate insiders, and it might fail to address issues that are characteristic of the SMEs and growth firms for whom microexchanges are designed.

For example, the natural seller side consists of early investors and corporate insiders that customarily are in possession of insider information. These shareholders tend to own relatively large share blocks in the company. Turning to the buy side, large investors might range from short-term speculators to blockholders looking for an acquisition.

To increase market integrity, it could be necessary to restrict share dealings by controlling shareholders in order to better align their interests with the interests of long-term retail investors. Moreover, it could be necessary to regulate corporate governance in a new way. On the buy side, single price periodic call auctions and restrictions on block-trading might fend off short-term speculators and increase the transparency of the market for retail investors. This is one more reason to use mandatory provisions of law to regulate the model of trading.[813]

Corporate governance. The governance model of the company should work properly without active participation by retail investors. To ensure that the corporate governance model fosters the interests of the firm and is aligned with

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812 Macey JR, O'Hara M (2005) p 589: "Thus, manipulation and insider trading increase the transaction costs of trading to specialists, market makers, and investors by widening the bid-ask spread that is a transaction cost of dealing in securities."

813 *Ibid.*, p 585: "Another area in which the costs and benefits of self-regulation may diverge concerns trading practices."

the mechanisms of the microexchange, it is proposed that the microexchange only is available to firms that have chosen a particular new company form that we call the small public limited-liability company (section 6.4.14).

Conclusion. Facilitating the development of microexchances is the most radical proposal in this book. On one hand, it is an idea that could help to study traditional SME markets from a new perspective. On the other, microexchanges could even be made to happen through regulatory dualism.

Microexchanges might benefit not only growth firms but even early investors, retail investors, crowdfunding, and the financial industry as a whole. Early investors need exit alternatives. Retail investors need an opportunity to make direct equity investments in growth firms at an earlier stage. Moreover, microexchanges could support crowdfunding that lacks secondary markets. For the financial industry, the existence of microexchanges and a larger number of companies with publicly-traded shares could provide new business opportunities. Platform operators, banks, and fintech might want an opportunity to develop new service products in new markets still untainted by competition.[814]

Microexchanges cannot be developed without mandatory provisions of law. For example, it is proposed here that the use of microexchanges should be permitted only for firms that use a new company form, namely the proposed small public limited-liability company (section 6.4.14).

6.4.14 Create a New Company Form: A Small Public Limited-liability Company

It would be wrong to say that current company law regimes offer either one company form regardless of firm size or different company forms for different kinds of firms. There are many company forms. But the rough design of company law regimes may for historical reasons reflect this distinction. When there is just one limited-liability company form regardless of firm size, a rather small and flexible company law regime can be complemented by a large securities law regime. The alternative is to use different limited-liability company forms, one for small private firms and the other for large public firms (section 2.4.9). Such company law regimes can be larger due to the fact that they are better adapted to the characteristics of firms.

814 Kim WC, Mauborgne R (2017/2004) p 130 on the blue ocean strategy.

While the distinction between different limited-liability company forms is not really a question of the size of firms as such,[815] firm size does matter a great deal in company law. In the historical development of company law, the fact that firms have different needs has influenced corporate practice and states have made it possible for firms to choose from a pool of business forms according to their needs (section 2.4.2). Firm size should matter in company law even today. Moreover, the needs of SMEs should matter more in the regulation of companies and securities markets.

A new company form. We propose a limited-liability company form designed for small public firms, a "small public limited-liability company" for Europe. On one hand, the proposal could be seen as a way to study existing company law from an extreme perspective to achieve incremental improvements to the current system. On the other, the proposal could be a radical way to address fundamental problems in the current system. It would also complement the proposed microexchange (section 6.4.13).

Technically, such a company form could be achieved in alternative ways. It could mean a separate statute on the small public limited-liability company (where the country has different statutes for different limited-liability company forms), a chapter on this particular company form in a public limited-liability company act (where the country has adopted separate statutes on private or public limited-liability companies), or a chapter on this particular company form in a general limited-liability company act (where the country has one general limited-liability company act). What the notion of a small public limited-liability company does not mean here is the variable application of sector-specific regulation depending on the size and other characteristics of the firm (such as labour laws, merger control, or prudential requirements).

The proposal has a connection to stock exchange law, since the purpose of the proposed company form is to increase the number of companies with publicly-traded shares.

815 Size did not matter as such in the EMCA Group's proposal for a European Model Companies Act. EMCA Group (2017) Introduction, section 7: "The distinction is not based on the size of the company but primarily on the fact whether its shares can be offered to the public/be publicly traded." Footnote 24: "See, for example, the Danish Companies Act, paragraph 6, Swedish Companies Act, Chapter 12, Sections 7–8. The former Danish Act on private companies (anpartsselskaber) aimed at regulating companies with only a little capital and few members. The Danish White Paper 1498/2008 on Modernizing Company Law, p. 32 states that both the public company form and the private company form are used by small and medium size companies. The committee therefore decided not to use a distinction based on the criterion of size. See also the SPE proposal, Article 3(1)(d)."

In regulatory practice, it is accepted that the number of listed companies cannot be increased without new exchanges for growth firms (such as SME growth markets,[816] "venture exchanges"[817] or the LTSE,[818] see sections 3.5 and 6.3.13) and a better legal framework for small issuers (such as a more flexible regulatory environment for "Emerging Growth Companies"[819] or the listing rules of the LTSE[820]).

The number of marketplaces has increased in recent years because of government regulation (including regulation at state, federal, or EU level). Such exchange regulation is largely mandatory for market participants that fall within its scope. The standardisation of exchanges, issuers, and disclosures reduces investors' search costs and transaction costs, makes it easier for investors to take investment decisions, and creates economies of scale in regulatory compliance and advisory services. Where the number of marketplaces is very large, it is better to replace the self-regulation of exchanges by government regulation.[821] Self-regulation by exchanges has been described as "systemically dysfunctional" in today's environment.[822]

Many of the issues that should be regulated one way or another could be regulated either in stock exchange law, securities law, or company law. The choice of the area of law depends on the jurisdiction (sections 2.1 and 4.1). For example, the "contractarian consensus" in US company law may have reduced the scope of US company law and increased the scope of other areas of law.[823]

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816 Defined in point (12) of Article 4(1) of Directive 2014/65/EU (MiFID II). See also recital 132 of Directive 2014/65/EU (MiFID II) on why SME growth markets were deemed necessary.

817 H.R. 5877, Main Street Growth Act.

818 SEC Release No. 34 – 85828 (May 10, 2019) (In the Matter of the Application of Long Term Stock Exchange, Inc. for Registration as a National Securities Exchange. Findings, Opinion, and Order of the Commission).

819 Section 101(a) of the JOBS Act added Section 2(a)(19) to the Securities Act of 1933. The thresholds are indexed for inflation. Section 101(b) of the JOBS Act added a similar Section 3(a)(80) to the Securities Exchange Act of 1934. See also European IPO Task Force (2015) pp 52 – 58.

820 See, for example, SEC Release No. 34 – 86327 (July 8, 2019) (Self-Regulatory Organizations; Long-Term Stock Exchange, Inc.; Notice of Filing of Proposed Rule Change to Adopt Rule 14.425, Which Would Require Companies Listed on the Exchange to Develop and Publish Certain Long-Term Policies).

821 In contrast, Romano R (1998) argued that securities law should be dispositive. See Kitch EW (2005) pp 36 – 37.

822 Macey JR, O'Hara M (2005) p 580.

823 See Kitch EW (2005) p 38.

Now, company law is a very complex thing. According to the matrix theory of company law, company law consists of a matrix of corporate governance rules, corporate finance rules, existential rules, and the policy preferences of the state (section 2.3).

To create the proposed microexchanges (section 6.4.13), it would be necessary to rebalance many interests. A new company form would make it easier for regulators to take a more holistic view in this new complex context. Moreover, regulatory dualism would provide a chance to circumvent the Olson problem, as it would not be necessary to change the regulation of existing public limited-liability companies.[824]

A simple company law statute could increase transparency and make regulation more easily understandable to founders, firms, investors, and other parties. Limiting the use of the microexchange to this company form could make it easier for investors to identify companies that fulfil minimum requirements as to corporate governance in the proposed new markets. Standardisation through mandatory provisions of company law would be necessary in order to prevent a market for lemons.

Facilitate the use of a microexchange. The small public limited-liability company law should facilitate the use of a microexchange, that is, an exchange for secondary trading in the company's shares only. Moreover, the microexchange should be reserved solely for companies that have chosen this company form. If this is the case, the mandatory provisions should include provisions akin to listing requirements. Such provisions should address the required characteristics of the company's shares and corporate governance.

The interests of the firm. Board members (or members of the company's management, administrative, and supervisory bodies) should have a duty to act in the interests of the company. The interests of the company should be interpreted as the interests of the firm (das Unternehmen, l'entreprise). The interests of the firm (Unternehmensinteresse, l'intérêt social) should thus provide the common goal for all board members.[825]

Alignment of investors' interests. The interests of the firm should prevail. In addition, the corporate governance model should align the interests of controlling shareholders with the interests of retail investors.

Controlling shareholders and retail investors have their own characteristic interests in corporate governance. In an SME, controlling shareholders custom-

824 See Gilson RJ, Hansmann H, Pargendler M (2011) pp 477–482 on regulatory dualism as a way to avoid or mitigate the Olson problem.

825 Mäntysaari P (2010a) section 8.2.5, Mäntysaari P (2012) section 7.3.

arily have provided funding and continue to provide important ancillary services. The characteristic interests of controlling shareholders can be summed up as maintaining control and ensuring managerial freedom.[826] Retail investors (as principals from their own perspective) rely on controlling shareholders as agents.[827]

The function of retail investors is different. If the microexchange is designed as a secondary market, retail investors are not a source of cash. Retail investors can provide some ancillary services as long-term investors such as valuation services when trading in shares. However, their ancillary services are limited. Retail investors lack the know-how, financial means, and financial incentives to actively participate in management and monitoring.

The function of retail investors should be taken into account when determining their legitimate interests. The narrow range of retail investors' ancillary services and their limited function makes it reasonable to limit their powers. Retail investors nevertheless have certain legitimate interests when they are long-term investors, namely participation in long-term value creation, access to information, and the self-enforcement of the governance model.

It is in the interests of long-term retail investors to participate in long-term value generation. Long-term retail investors can benefit both from the growth of the firm and from legal rules protecting their relative share of shares and profits. This can be achieved in three ways.

First, the legal capital regime should be applied. In the EU, shareholders are protected by a large legal capital regime.[828] The legal capital regime, which is not the same thing as a rule on minimum share capital, gives shareholders power to vote on many transactions related to the company's shares or capital.[829]

Second, it is in the interests of both the firm and long-term retail investors to limit distributions. In venture capital practice, it is customary to restrict distributions. The assets of the company will be invested to finance the company's growth rather than distributed to shareholders or fund investors. The same principles can be applied when designing a company law regime.

Third, retail investors should be able to participate in the exit of controlling shareholders when controlling shareholders sell their block. In venture capital

826 See Mäntysaari P (2010a) section 9.4; Mäntysaari P (2012) section 9.4.4.

827 See Mäntysaari P (2010a) pp 304 and 306 – 307.

828 See, in particular, Chapter IV of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

829 For differences between EU law and US law, see Bebchuk LA (2005); Mäntysaari P (2010c) sections 5.3 and 5.4.

practice, it is customary for the parties to agree on the rights of investors in the context of exit.

Moreover, long-term retail investors benefit from a self-enforcing governance model (sections 6.3.8 and 6.3.11).[830] It is in the interests of long-term retail investors to participate in long-term value creation without the need to participate in management or monitoring. Self-enforcing governance models have been used in company law for this purpose since the German company law reform of 1884 (section 2.4.5). They are customary in cooperatives. Cooperatives are examples of Ostrom's common-pool resources (section 6.3.11).

The self-enforcing governance model should rely on a common goal, the distribution of power between different corporate bodies, mixed monitoring,[831] and the separation of management and monitoring. Provisions of company law should be complemented by criminal and administrative sanctions enforced by public authorities in serious cases.

Overreliance on disclosures should be avoided.

Mandatory provisions. The company law regime should mainly consist of mandatory provisions of law that ensure sufficient standardisation and enforcement by public authorities.

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830 Mäntysaari P (2012) Chapter 8.

831 For example, there are traces of mixed monitoring even in the governance model of LTSE. SEC Release No. 34 – 85828 (May 10, 2019), II: "[T]he Commission finds that the proposed rules of LTSE are consistent with Section 6 of the Act in that, among other things, they are designed to: (1) assure fair representation of the exchange's members in the selection of its directors and administration of its affairs and provide that, among other things, one or more directors shall be representative of investors and not be associated with the exchange, or with a broker or dealer …" III.A.1: "In particular, the Commission believes that the requirement in the LTSE Bylaws that the number of Member Representative Directors must be at least 20 % of the Board and the means by which they will be chosen by LTSE members provide for the fair representation of members in the selection of directors and the administration of LTSE and therefore are consistent with Section 6(b)(3) of the Act. As the Commission has previously noted, this requirement helps to ensure that members have a voice in an exchange's self-regulatory program, and that an exchange is administered in a way that is equitable to all those who trade on its market or through its facilities." LTSE Rule 1.160: "Unless the context otherwise requires, for all purposes of these LTSE Rules, terms used in LTSE Rules shall have the meaning assigned in Article I of the Exchange's Bylaws or as set forth below: … (v) Member: The term "Member" shall mean any registered broker or dealer that has been admitted to membership in the Exchange. A Member will have the status of a Member of the Exchange as that term is defined in Section 3(a)(3) of the Act. Membership may be granted to a sole proprietor, partnership, corporation, limited liability company, or other organization that is a registered broker or dealer pursuant to Section 15 of the Act, and which has been approved by the Exchange."

Properly designed and enforced statutory minimum standards can prevent the emergence of a market for lemons[832] and reduce retail investors' search costs.[833] Such standards can help to screen issuers and filter fraudulent, speculative, or otherwise unserious issuers and offerings. Standardisation based on the mandatory provisions of company law could thus help to increase retail investors' direct equity investments.[834] In contrast, a high level of flexibility for a specific company form would increase shareholders' search costs and reduce retail investors' direct equity investments.[835]

Restricting flexibility for a new company form would not restrict the overall level of choice in company law. A new company law regime based on regulatory dualism would increase choice by its mere existence. It would be complemented by other company forms and other forms of market organisation. The existence of alternatives would ensure a sufficient level of choice.[836]

Separation of monitoring and management. The small public limited-liability company should have a board structure with clear separation of monitoring and management functions.

Since the German company law reform of 1884, it has been understood that small shareholders make poor monitors due to their limited resources and incentives and that management and monitoring should be separated at board level in public companies (section 2.4.5). There should therefore be a board for monitoring (a supervisory board).[837]

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832 Akerlof GA (1970). Daniel Davies, A scammer's charter for European capital markets. Financial Times, 9 November 2015: "The barriers that hold back small companies seeking equity financing are also the ones that separate unscrupulous stock promoters from investors' wallets."
833 See even Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.3: "There is a need, on the one hand, to make small firms in need of financing better aware of the market-based funding options available to them and, on the other, to make firms more visible to prospective local and pan-European investors."
834 In contrast, see Kitch EW (2005) pp 36–37 on choice: "The argument for issuer and purchaser choice is that purchasers are just as capable of judging the information disclosure and liability regime that they prefer to govern the securities they purchase as they are able to judge the terms of the security, or to make judgments about the economic future of the issuer."
835 Compare *ibid.*, p 35 on reliance on default rules: "Corporate law has come to be understood as a system of multi-party contractual relationships, a subpart of contract law. Corporate law provides default rules that can be varied by the parties ... The law has shifted from a concept of mandatory corporate norms to a concept of a set of organizational options."
836 *Ibid.*, pp 36–37 and Romano R (1998) want to extend choice to company law and securities regulation.
837 See §§ 111–112 of the German Aktiengesetz (AktG) on the German supervisory board. In the US, monitoring was proposed as the primary board function by Eisenberg MA (1976). See also SEC Release No. 34–86327 (July 8, 2019), I.1(D) on the boards of LTSE-listed companies: "Pro-

The supervisory board should monitor a management board responsible for the management of the company (such as in a German AG) or one or more managing directors (such as in a German GmbH).[838] Members of the management board or the managing directors should be the top executives of the company.

Members of the supervisory board should be appointed by shareholders in general meeting. Members of the management board or the managing directors should be appointed by the supervisory board. Where the top executives of the company are appointed by the supervisory board, they are better shielded against non-controlling shareholders and will have more discretion to focus on business development and acting in the long-term interests of the firm.[839] In practice, controlling shareholders will have the final say.

It is inevitable that the supervisory board and management are controlled by the controlling shareholders. One may ask whether there should be a mechanism to increase diversity. It does not seem feasible to require board diversity for small growth firms.

Multiple classes of shares. The use of two classes of shares should be permitted. It is common practice in growth firms to use multiple classes of shares. Some venture-capital-funded companies may have issued a new class of shares per each funding round. The use of different classes of shares should therefore be permitted in small public limited-liability companies.

However, some restrictions may be necessary to increase transparency and the comparability of shares traded on microexchanges, to reduce search and transaction costs for retail investors, and to reduce abuse. For these reasons, shares traded on a microexchange should be common equity each share conferring one vote.

To make the microexchange and the small public limited-liability company relevant for founders and growth firms, the company should be permitted to have one additional class of shares. When the company uses a microexchange,

posed 14.425(a)(4) would require that each LTSE-Listed Issuer adopt and publish a policy explaining the engagement of the LTSE-Listed Issuer's board of directors in the LTSE-Listed Issuer's long-term focus, including discussion of whether the board and/or which board committee(s), if any, have explicit oversight of and responsibility for long-term strategy and success metrics. The Exchange believes the boards of directors should be engaged with the LTSE-Listed Issuer's forward-looking, long-term strategy, rather than serving primarily an audit function and looking backwards, as many boards seem to today." The opposite is the backward-looking board as a service proposed by Bainbridge SM, Henderson MT (2014).

838 See also § 100 AktG.

839 Mäntysaari P (2012) Chapter 9.

the company should only issue common equity shares each conferring one vote.[840]

Pre-emptive rights. There should be pre-emptive rights. Pre-emptive rights are characteristic of European company law and its legal capital regime. It is customary to protect the rights of existing shareholders even in venture capital practice. Since growth firms need new funding rounds, the conditions for waiving pre-emptive rights should make it possible for the company to raise cash from new investors or acquire non-cash assets.

Fully paid-up share capital. The minimum fully paid-up share capital should depend on whether the company uses or does not use a microexchange. There should be no minimum share capital higher than €1 or $1 for small public limited-liability companies in general. There should be a higher minimum share capital for small public limited-liability companies that decide to use a microexchange.

While a high minimum share capital would hamper the use of this new company form, an adequate minimum and paid-for share capital for companies that choose to have their shares traded on a microexchange would signal early investor commitment, reduce the risk of abuse, increase the firm's survival chances, signal lower risk exposure, and hopefully increase the use of microexchanges and retail investors' direct share ownership in growth firms.

Remuneration. Generally, the remuneration of a board member or managing director should not exceed what is reasonable. Without any statutory constraints, board members and managing directors would have the opportunity and incentives to increase their own pay.[841]

A general open standard of reasonableness could be complemented by a prohibition of the most abusive practices such as golden handshakes payable on or after termination of the board membership or managing director position. Share-based incentives should not be used for the remuneration of supervisory board members in their capacity as supervisory board members.

Audits, monitoring and enforcement. There should be a statutory audit requirement. Monitoring by the supervisory board, peer-to-peer monitoring, and

840 Compare Hill J (2021) section 2.1 p 19: "Allow companies with dual class share structures to list in the premium listing segment but maintain high corporate governance standards by applying certain conditions. These would include: · a maximum duration of five years; · a maximum weighted voting ratio of 20 to 1; · require holder(s) of the Class B shares to be a director of the company; · voting matters being limited to ensuring the holder(s) are able to continue as a director and able to block a change of control of the company while the DCSS is in force; and · limitations on transfer of the B class shares."

841 See Bebchuk LA, Fried JM, Walker DI (2002).

mixed monitoring in general should be complemented by monitoring and enforcement by public authorities.

6.4.15 Facilitate the Pooling of Retail Investors' Private Placements

Since most growth firms lack publicly-traded shares, retail investors would benefit from a chance to participate in private placements in growth firms. However, the marginal cost to companies of including individual retail investors in private offerings is too high and the marginal benefit to companies too low.[842] The pooling of investments might help.

The equity funding of start-ups mainly consists of private placements. It can start with "friends and family". There can be many funding rounds. Retail investors customarily cannot participate in these funding rounds directly because of legal restrictions, the discrepancy between high costs and low benefits to issuers, and the lack of a mechanism to connect retail investors with start-ups. Moreover, retail investors lack the necessary know-how and diversification opportunities that are part of the business model of venture capital firms and institutional investors that customarily use pooling.[843]

To participate in private placements, retail investors would therefore need a chance to pool their investments.[844] In practice, this would require low-cost exchange-traded funds (ETFs),[845] venture capital structures for retail investors, equity crowdfunding pools, or new structures[846] such as Special Purpose Acquisition Companies (SPACs).

Low-cost exchange-traded funds. Low-cost exchange-traded funds (ETFs) are a legally uncontroversial and commercially viable alternative for retail investors. Under normal trading conditions, ETFs can turn the underlying illiquid equity

842 Clayton J (2019).

843 Williamson JJ (2013) p 2077.

844 *Ibid.*, p 2077: "Offering pooled investment vehicles would not require investors to use them, of course. Those who prefer to invest directly could still do so. By excluding them, however, investors are deprived of their choice in the matter, and, most critically, many simply will not be able to invest in start-ups."

845 For fee levels, see European Commission (2018) section 4.1.1.3 on equity funds, section 4.1.2 on ETFs, section 4.1.3.2 on listed equities, and section 4.2.2 on online services.

846 Clayton J (2019): "We are taking a fresh look at this framework, including examining whether appropriately structured funds can facilitate Main Street investor access to private investments in a manner that ensures incentive alignment with professional investors – similar to our public markets – and otherwise provides appropriate investor protections."

investments into liquid securities.[847] ETFs are a disruptive trend in asset management.[848] ETFs have already overtaken hedge funds as an investment vehicle.

In the EU, ETF offerings are heavily influenced by regulation. They benefit from the regulation of the internal market. ETF offerings fall within the scope of MiFID II and the PRIIPs Regulation (PRIIPs)[849] that increase disclosure obligations.

Designed to increase European capital markets,[850] PRIIPs nevertheless hampers the offering of non-EU ETFs to European retail investors in two ways. First, PRIIPs lays down an obligation to publish a key information document in the local language.[851] This has reduced the offerings of US ETFs especially in the smaller Member States of the EU such as in Sweden.[852] Second, costs are calculated and disclosed in different ways under PRIIPs, MiFID II, and the UCITS Directive.[853]

Venture capital funds for retail investors. Venture capital funds for retail investors could be an alternative. The problems with such funds include high administrative costs, lack of transparency, lack of liquidity in the absence of secondary markets, the risk of abuse (as investment companies not only charge a performance fee based on returns but even a flat management fee determined as a percentage of their total assets),[854] and the negative selection of asset managers.

The negative selection of asset managers could be triggered by the mere existence of parallel venture capital markets for qualified investors and retail investors. Asset managers might have incentives to serve institutional investors and rich individuals rather than retail investors.

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847 For the ETF as a way to invest in corporate bonds, see The Economist, Buttonwood. First come, first served, 13 July 2019.

848 FESE (2019) p 12.

849 Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs).

850 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 4.1.

851 Article 7 of Regulation 1286/2014 (PRIIPs).

852 Jesper Mothander, Låst läge i amerikanska konflikten. Dagens industri, 6 January 2018, p 7.

853 Directive 2009/65/EC (UCITS); European Commission (2018) p 116; Frankfurter Allgemeine Zeitung, Anlegerschutz stiftet bei Fonds Verwirrung, 8 August 2018: "Im Kern geht es um die komplexe Frage: Was genau kostet ein Fonds? … Die drei Richtlinien kommen zu unterschiedlichen Lösungen …"

854 Williamson JJ (2013) p 2079.

As regards liquidity, the core question is how to facilitate retail investors' indirect investments in illiquid assets such as private SME stocks. In practice, regulators need to decide to what extent open-ended funds may invest in hard-to-sell assets.[855] To cope with investor withdrawals, it is customary to ask open-ended funds to invest in liquid assets such as listed equities with a regulator-imposed ceiling in hard-to-sell assets. Such requirements are not as relevant in the case of closed-end funds. To foster investments in illiquid assets such as private SME stocks, regulators could make it easier to use closed-end funds.

In the US, venture capital funds for retail investors are hampered by securities laws. Venture capital grew after the adoption of the National Securities Markets Improvement Act (NSMIA) of 1996 that exempted from state blue-sky laws the sale of securities to "qualified purchasers" and exempted certain funds from the SEC registration requirement (section 5.2). The thresholds in NSMIA have effectively excluded middle-income investors.

Access to venture capital funds was made easier in 2020 when the SEC decided to broaden the pool of "accredited investors" (section 6.4.5).[856] Accredited investors are allowed to have access to venture capital funds. Amendments to the accredited investor definition in Rule 501(a) added a new category to the definition that permits natural persons to qualify as accredited investors based on certain professional certifications, designations or credentials.

In US equity crowdfunding, retail investors' access is hampered by section 302(b) of the JOBS Act. Section 302 provides for a crowdfunding exemption from registration requirements for "emerging companies" and allows emerging companies to raise up to a total of $1 million annually from individuals who do not meet the "accredited investor" threshold.[857] Traditional venture capital investments in private companies are in practice not hampered by such limits (section 5.2). To make it possible for retail investors to participate in equity crowdfunding, the threshold should be increased. Moreover, section 302(b) of the JOBS Act prohibits "investment companies" from operating under the Act, preventing companies that make investments for others from offering mutual fund-type products. The exclusion of "investment companies" does not make it easier for middle-income investors to diversify their holdings.[858]

855 Owen Walker and Peter Smith, Neil Woodford slams the gate in investors' faces. Withdrawals bar could signal the end for UK's highest-profile fund manager. Financial Times, 4 June 2019.
856 SEC Release Nos. 33 – 10824, 34 – 89669 (August 26, 2020) (Accredited Investor Definition); SEC Modernizes the Accredited Investor Definition, Press Release, August 26, 2020.
857 Williamson JJ (2013) p 2074.
858 *Ibid.*, p 2075.

In the EU, the most important regulatory acts in this area are the UCITS Directive,[859] the Alternative Investment Fund Managers Directive (AIFMD),[860] and the European Venture Capital Fund Regulation (EuVECA). The European Commission regards this as a focus area.[861]

Mutual funds fall within the scope of the UCITS framework. While the UCITS Directive permits investments in shares,[862] the shares generally should be shares admitted to trading on a regulated market.[863] No more than 10 % of the fund's assets may be invested in other than listed shares.[864]

In contrast, AIFMD permits investments in unlisted shares. AIFMD is the most significant piece of EU legislation affecting the private equity and venture capital industry. AIFMD has created a framework for alternative investment managers such as managers of private equity, venture capital, and real estate funds. Fully authorised AIFMs may utilise an EEA passport that allows EEA AIFMs to market and manage AIFs in other EEA countries. Depending on the Member State, AIFs may be marketed even to retail investors under AIFMD. A Member State may allow the marketing of AIFs to retail investors in its territory[865] coupled with stricter requirements to protect retail investors.[866] There is an exemption providing for a lighter regulatory regime for small funds.[867] The exemption applies to AIFMs whose total assets under management do not exceed the thresholds of €500 million (provided the AIFs are not leveraged and investors have no redemption rights for the first five years) or €100 million (including assets acquired through leverage). These thresholds and the existence of a stricter regulatory regime for larger funds were motivated by the management of systemic

859 Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) (recast). See even Zetzsche DA, Preiner C (2018) pp 231–232.

860 Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

861 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, section 4.2, pp 16–18.

862 Point (n) of Article 2(1) of Directive 2009/65/EC (UCITS Directive).

863 Article 50(1) of Directive 2009/65/EC (UCITS Directive).

864 Point (a) of Article 50(2) of Directive 2009/65/EC (UCITS Directive).

865 First subparagraph of Article 43(1) of Directive 2011/61/EU (AIFMD).

866 Recital 71 and second subparagraph of Article 43(1) of Directive 2011/61/EU (AIFMD).

867 Article 3(2) of Directive 2011/61/EU (AIFMD).

risk[868] but are obviously a concern for successful small fund managers that want to see their funds grow.[869]

Whether non-EEA and sub-threshold AIFMs may market their products to EU investors depends on the Member States' National Private Placement Regimes (NPPRs). For example, the operations of UK private equity and venture capital funds in the EEA are hampered by Brexit.

The European Venture Capital Fund Regulation (EuVECA) is a voluntary regime and introduces a marketing passport regime for venture capital fund managers.[870] EuVECA enables European fund managers that fall below the threshold at which AIFMD would apply to them[871] to market their EU funds across Europe without having to comply with the more onerous requirements that come with the AIFMD passporting regime. They may even use the designation "EuVECA" when marketing qualifying venture capital funds.[872] Because of the restrictive eligibility criteria, the take up of EuVECA by the venture capital sector has been slow. The 2015 Capital Markets Union action plan included measures intended to address the eligibility criteria.[873]

Public venture capital. Ibrahim distinguishes between private and public venture capital. Private venture capital is characteristic of Silicon Valley. Public venture capital means according to Ibrahim junior stock exchanges (SME exchanges) and crowdfunding.[874] The suggested distinction does not seem to describe the respective services of venture capital investors, SME exchanges, and the operators of crowdfunding platforms very well, but it does give some food for thought.

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868 Recital 17 of Directive 2011/61/EU (AIFMD).

869 Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, section 4.2, pp 16–18: "A particular concern that has been raised is that managers whose portfolio exceeds €500 million cannot apply to set up and operate such a fund, nor can they use these designations to market the funds in the EU. Widening the range of market participants could potentially increase the number of EuVECA and EuSEFs available."

870 Article 1 of Regulation 345/2013 (EuVECA).

871 Article 2(1) of Regulation 345/2013 (EuVECA).

872 Article 4 of Regulation 345/2013 (EuVECA).

873 See also Commission Staff Working Document on the Movement of Capital and the Freedom of Payments. Document prepared by the Directorate-General for Financial Stability, Financial Services and Capital Markets Union (DG FISMA), SWD(2018) 103 final, section 4.2 p 45: "The new legislation extended the range of managers eligible to market and manage EuVECA and EuSEF funds to include larger fund managers, i.e. those with assets under management of more than €500 million. For EuVECA, alternative investment fund managers can also now operate EuVECA funds and invest in SMEs listed on SME growth markets and companies other than SMEs (small midcaps with up to 499 employees)."

874 Ibrahim DM (2019) pp 1139 and 1168.

On one hand, "public venture capital" is an oxymoron. The services of traditional venture capital investors are not limited to capital investment but include important ancillary services as well. The public may sometimes be a source of cash, but the public cannot provide the same ancillary services. Moreover, SME exchanges and the operators of crowdfunding platforms are not a source of cash. Even if investors that use such exchanges or platforms were regarded as a source of cash, their ancillary services would be different. Junior exchanges and crowdfunding platforms therefore are not forms of venture capital. Venture capital investments are a category of equity investments, but all equity investments are not venture capital.

On the other, there could be at least three ways to make private venture capital public.

First, a private asset management company can go public. A private asset management company can earn revenue from the management of investment funds, from other services, and from its own investments such as investments in private assets or its own funds. Problems caused by the limited transparency of such business are to some extent mitigated by the fact that the asset management company earns fixed fees based on assets under management (in addition to result-based fees).

Second, there can be unbundling of funding and services.[875] Funding can be separated from ancillary services. Funding raised from the public can be complemented by the organised provision of services customarily regarded as the ancillary services of venture capital investors.

Third, after unbundling, the operator of an SME exchange or a crowdfunding platform could choose to organise the provision of the customary ancillary services of venture capital investors as curation.[876] In fact, curation belongs to the fundamental services of two-sided platforms in platform economy. This alternative would mean moving the ancillary services from investors to the platform, that is, either to the operator of the platform itself (integration) or third parties (outsourcing or crowdsourcing). Such new structures can be illustrated with the case of Companisto.

New structures: Companisto and the platform business model. In practice, there should be an intermediary for the pooling of retail investors' direct holdings. The use of an intermediary will facilitate pooling but increase costs. The op-

875 See even Ibrahim DM (2015) p 590.
876 This was pointed out by Ibrahim DM (2019) pp 1172–1173.

erator of a crowdfunding platform could act as an intermediary and optimise its business model as a platform to reduce costs.[877]

Companisto GmbH started as the operator of a crowdinvesting platform in Germany and benefited from the Kleinanlegerschutzgesetz of 2015 that limited the scope of prospectus requirements for crowdfunding platforms.[878] Due to the slow growth of the German crowdinvesting market, Companisto changed course in 2019. Companisto left crowdinvesting, became a platform for the pooling of angel investments in closed financing rounds, and focused more on curation (demand-side curation and supply-side curation).

In 2019, Companisto facilitated equity investments in start-ups and growth companies in two closed equity financing rounds. The first financing round was limited to members of the Companisto Angel Club. The Angel Club consisted of professional investors such as entrepreneurs, executives and financially strong individuals. A member of the closed Angel Club could invest from €10,000 to 300,000 per company. The second financing round was broader but limited to accredited Companists, that is, registered members of Companisto's large investor network called Companisto Investment Club. Companisto had 100,000 registered members in its network in 2019. A Companist could invest from €1,000 to €25,000 per company.

In other words, investments with very high risk (first round) were only offered to wealthy investors that could diversify their holdings and accept a higher risk per investment. Investments with slighly lower risk (second round) were offered to a broader group of affluent investors but still in a closed funding round. From the perspective of members of Companisto Investment Club, the staging of investments and limiting investments in the first round to members of the Angel Club worked as a curation mechanism. Companisto thus used demand-side curation with demand for securities on this side and the supply of securities on the other side.

The existence of two investor categories and the use of two funding rounds was reflected in the use of two classes of shares and pooling. In the first investment round, members of the Angel Club subscribed for A shares in the target company. In the second funding round, members of the Companisto Investment Club subscribed for B shares.[879] Moreover, they invested in the target company's

877 Companisto press release, 9 July 2019 (Neupositionierung: Companisto wird zum Investoren-Netzwerk).

878 See Heike Hechtel, Katharina Schermuly, Dennis Vogel, Vermögensanlagen: Erfahrungen mit dem Kleinanlegerschutzgesetz. BaFin website, 15 March 2017.

879 Miriam Binner, Companisto: Berliner Start-up gibt Crowdinvesting auf. Handelsblatt, 11 July 2019.

equity through an investment company. This was supported by a pooling agreement between investors.

The relatively large number of investors reduced the ancillary services of individual investors. Companisto therefore needed a mechanism to replace the traditional advisory and signalling services of angel investors. The mechanism was supply-side curation.[880] To increase supply-side curation, Companisto encouraged investors to participate on the platform even in the capacity of experts. Companisto connected portfolio start-ups with expert investors.

In 2019, Companisto explained its fees on its website as follows: "Companisto is financed by a purely performance-related commission of 15 percent of the collected investment sum. This commission is paid by the startup – not the [investors]. All costs incurred by Companisto are financed by the commission ... The startup only has to pay the commission if the financing round was successful. Companisto also receives a solely performance-related commission ('carry fee') of ten percent of the profits from the company participation. This means that if a company distributes profits or sales proceeds to the [investors], Companisto participates: 'We win if you win!'"

New structures: SPACs. The fastest growing functional equivalent to the pooling of retail investors' private placements is the SPAC (section 5.5).[881] SPACs do not need any new decentralised platforms. SPACs benefit from existing centralised trading on stock exchanges.

In SPAC practice, the IPO of the SPAC is separated from the raising of funding by the operating company. The IPO and the raising of funding are both separated from the ancillary services customarily provided to the operating company by venture capitalists or incubators. The SPAC IPO is simple, because the SPAC is just a shell. The business combination process is simple, because the terms of the business combination are negotiated by the operating company and SPAC sponsors before the de-SPAC. After the business combination, the operating company will benefit from the SPAC's listing.

The end result is that the SPAC's investors hold shares in a combined entity that is a listed operating company. But their share ownership has been diluted on two or three occasions along the way. First, it has been diluted by the sponsor promote. Second, more capital may have been raised trough a PIPE before the business combination. Third, the business combination is expected to be a reverse takeover after which the shareholders of the operating company end up

880 For supply-side curation under Regulation Crowdfunding in the US, see Ibrahim DM (2019) pp 1172 – 1173.
881 Generally, see Klausner M, Ohlrogge M, Ruan E (2021); Hill J (2021).

with a large block of the combined entity's shares. Costs can therefore be high because of dilution.

Costs are increased by underwriting and advisory costs. Moreover, costs can be increased by the fact that the hedge funds and other institutional investors that were primary investors in the SPAC IPO often exit the SPAC before the business combination.[882] Such investors are not interested in the long-term success of the operating company.

6.4.16 Use Financial Technology

Capital markets will be changed by fintech. There will be new kinds of trading platforms, new forms of trading, new services to issuers, new services to retail investors, and new ways to help retail investors take rational investment decisions.[883] Technological advancement has played a role in market development according to a long-term trend.

Fintech was first seen to disrupt the business of large established financial firms. Large established firms are nevertheless investing in fintech as well. It can be easier for already large firms to create economies of scale and positive network effects.[884]

Established firms will grow in fintech organically or through takeovers. The large established firms that invest in fintech range from traditional banks and traditional exchange operators to big retailers, big tech, and social media

882 Coates J (2021).

883 Cartwright BG (2007): "Anyone thinking about the future of securities regulation can't help but focus on the advance of technology and its close cousin, globalization." For the potential of fintech, see Accenture (2014); Deutsche Börse AG, Celent (2016); CFPB (2016); Philippon T (2020). For AI in finance, see Robin Wigglesworth, Fintech: Search for a super-algo. Financial Times, 20 January 2016. For insurance, see Oliver Ralph, Insurance: Robots learn the business of covering risk. Financial Times, 16 May 2017. For trading, see Martin Arnold and Laura Noonan, Robots enter investment banks' trading floors. Financial Times, 7 July 2017. For lawtech, see Jane Croft, Artificial intelligence closes in on the work of junior lawyers. Financial Times, 4 May 2017.

884 Paragraph 56 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange): "Financial market infrastructure platforms at all levels of the value chain are characterised by significant network effects." The Economist, The giants are coming, 15 June 2019; Deutsche Börse AG, Celent (2016): "In the first phase, fintech was seen as a disrupter for large established financial companies. Now that these companies as well as regulators are responding to raise the level of customer protection, we are at the cusp of a next wave, where the financial incumbents become platforms-hosting and interoperating with newer, smaller players."

giants.[885] Fintech can provide services to retail investors, marketplaces, and issuers.

Services to retail investors. Retail investors have learnt to use online platforms.[886] Fintech could help to increase retail investors' direct equity investments in several ways. For example, they could provide at low cost to retail investors: search, analysis, and ranking of issuers (curation); personal investment advice; technical solutions for cross-border direct equity investment; and technical solutions for the operation of microexchanges or other new secondary markets.

The wealth of digital information creates demand for search and curation mechanisms. Search, analysis, and ranking belong to the core functions of online platforms. They are vital for the efficiency of capital markets as well.[887] Fintech can be expected to develop these services for retail investors.[888]

The most basic search and curation mechanisms are search engines or online filtering tools such as Google. In practice, they may be functional equivalents to advice engines. The reason for the existence of search engines and online filtering tools is that they produce results that in practice will be acted upon. One may ask whether the results of online searches or filtering are perceived or interpreted as "recommendations"[889] such as in investment advice. Should online search or filtering tools be regarded as a form of investment advice? Obviously, treating search results generally as "recommendations" that fall within the scope of the regulation of investment advice would go much too far.[890]

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885 The Economist, Coin flip, 22 June 2019: "Enter the Libra consortium … They include financial firms (Visa, Stripe), online services (Spotify, Uber), cryptocurrency wallets (Anchorage, Coinbase), venture capitalists (Andreessen Horowitz, Union Square Ventures) and charities (Kiva, Mercy Corps)—though, for the time being, no banks. Not a libertarian alternative to the existing financial system, in other words, but a complement."

886 See European Commission (2018) section 4.2 p 72 on costs and section 8 on the impact of online platforms and new fintech solutions on retail investment distribution.

887 See, for example, Teigelack L (2017) § 26 paragraphs 1–7 on financial analysts as information intermediaries.

888 See already Macey JR, O'Hara M (2005) p 569: "Times have changed. The advent of technology has dramatically reduced the costs of trading, thereby allowing a wide range of competitors to enter what was traditionally the exchange's sole province. Similarly, whereas the exchange once enjoyed a preeminent role in functions such as signaling issuer quality, now a host of alternatives such as financial analysts, newsletters, and investment banks provide a larger quantity and a higher quality of information about issuers."

889 Point (4) of Article 4(1) of Directive 2014/65/EU (MiFID II): "… 'investment advice' means the provision of personal recommendations to a client, either upon its request or at the initiative of the investment firm, in respect of one or more transactions relating to financial instruments …"

890 See recital 21 of Regulation (EU) 2020/1503 (ECSP Regulation) on the distinction between filtering tools on a crowdfunding platform that do not fall within the scope of MiFID II and

Where investment advice is a regulated activity, it may need to be an independent activity. Investment recommendations may need to be suitable. In the future, it will become easier to provide personal investment advice with the help of technology and big data. Technology such as robo-advisers could help to address cognitive biases and the problem that retail investors may not be able to act rationally without outside help.[891] Big tech firms have access to large amounts of personal information about each retail investor. Fintech could make it easier to comply with the know-your-customer rule, provide independent (algorithmic) advice, and ensure that the advice reflects the situation of the retail investor.

Unfortunately, investment advice is hampered by the European regulatory regime. When investment advice is provided as a professional activity,[892] it falls within the scope of MiFID II.[893] This triggers several obligations under MiFID II. For example, MiFID II not only lays down minimum standards for the service.[894] The provisions of MiFID II dealing with costs and pricing act as a constraint on the revenue models of firms that want to provide investment advice.[895]

The regulatory regime hampers the market for investment research as well. MiFID II requires the splitting of payments for research and trading. This has caused the investment research industry to shrink. Moreover, if a US bank receives direct payments for research from its European customers, it must register

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those that are regarded as investment advice under MiFID II: "The existence of filtering tools on a crowdfunding platform under this Regulation should not be regarded as investment advice under Directive 2014/65/EU as long as those tools provide information to clients in a neutral manner that does not constitute a recommendation. Such tools should include those that display results based on criteria relating to purely objective product features." Recital 30 of Directive (EU) 2019/770 (Directive on certain aspects concerning contracts for the supply of digital content and digital services): "Union law relating to financial services contains numerous rules on consumer protection ... Contracts relating to digital content or digital services that constitute a financial service should therefore be excluded from the scope of this Directive."

891 See, for example, Schwartz A (2015).

892 See also point (k) of Article 2(1) of Directive 2014/65/EC (MiFID II) on investment advice as an ancillary activity and point (b) of Article 3(1) of Directive 2014/65/EC (MiFID II) on optional exemptions.

893 Point (5) of section A of Annex I to Directive 2014/65/EU (MiFID II); point (4) of Article 4(1) of Directive 2014/65/EC (MiFID II) on the definition of "investment advice"; recital 70 of Directive 2014/65/EC (MiFID II) on the "continuous relevance of personal recommendations for clients".

894 Articles 24–26 and recital 71 of Directive 2014/65/EC (MiFID II).

895 See Articles 24(4), 24(7) and 24(10) and the first subparagraph of Article 24(11) of Directive 2014/65/EC (MiFID II). See also recitals 72 and 74–75 of Directive 2014/65/EC (MiFID II).

as an "investment adviser" under general SEC rules. To avoid this extra regulatory burden on US banks, the SEC granted an exemption in October 2017.[896]

Services to marketplaces and issuers. Technology has already changed the business of exchanges and the organisation of stock markets. In fact, operators of stock exchanges have turned into technology and data firms. Fintech obviously will offer services to marketplaces and issuers.

Depending on the regulatory regime, fintech could provide technical solutions for the operation of traditional stock exchanges and new secondary markets. First, a fintech firm could just provide software to the operator of the exchange. Second, it could act as a more integrated outsource provider. Third, it could itself act as the operator of a marketplace. The choice between these alternatives can influence regulatory compliance obligations. Fourth, a fintech firm could provide a technology platform for the proposed microexchange and become what Shopify is to e-commerce.

As regards the proposed microexchanges, the operator of the microexchange would need to outsource functions to fintech even for reasons of regulatory compliance.[897]

In the EU, MiFID II addresses many aspects of outsourcing. MiFID II regulates the business of central counterparties (CCPs),[898] clearing houses, and settlement systems (and the right of "direct and indirect [cross-border] access to CCP, clearing and settlement systems")[899] and the business of "consolidated tape providers" (CTPs).[900]

Moreover, the revised Payment Services Directive (PSD2) may help in outsourcing some marketplace functions.[901] Under PSD2, payment services may

896 Richard Henderson, SEC to extend Mifid exemption for US brokers' research. Financial Times, 22 July 2019.

897 For cryptocurrency exchanges as an example of technological creativity, legal challenges, and crimes, see Van Valkenburgh P (2019); United States Department of Justice (2020); Kadhim Shubber, US charges bitcoin exchange founders over money laundering. Financial Times, 1 October 2020 (on BitMEX); Izabella Kaminska, When crypto exchanges decentralise. Financial Times, 12 October 2020.

898 A CCP is defined in point 51 of Article 4(1) and recital 15 of Directive 2014/65/EU (MiFID II).

899 Articles 37(1) and 55 of Directive 2014/65/EU (MiFID II). See also Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

900 Point 53 of Article 4(1) of Directive 2014/65/EU (MiFID II).

901 Directive 2015/2366/EU of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (PDS2).

be provided by banks or non-banks.[902] PSD2 facilitates the business of account information service providers (AISP) and payment initiation service providers (PISP). A PISP is a service provider that initiates a payment on behalf of the user.[903] An AISP is a service provider that has access to the account information of bank customers.[904] In practice, banks end up competing against social media companies, fintech companies, and big tech. Since neither AISPs nor PISPs are permitted to hold customer funds, they do not need to comply with minimum capital requirements, unlike banks that must comply with minimum capital requirements (CRD IV, Basel III).[905]

Fintech firms could provide a technological platform for the marketplace and perhaps operate the platform as a service. Platforms can already be operated as a service in e-commerce.[906] Generally, fintech has developed alternative funding platforms and peer-to-peer (P2P) business models.[907]

The regulatory regime should leave room for development. One should distinguish between technology and business models. While the principle of technology neutrality would make it possible to benefit from more efficient technologies,[908] it would be difficult to develop new business models that can provide an alternative to financial intermediation unless such new things are governed by a different regulatory regime under regulatory dualism.

Case: Invesdor and platform as a service. In 2019, the merger of the businesses of Invesdor Oy, a digital equity funding platform in the Nordic countries, and Finnest GmbH, a digital SME financier in the German speaking countries, created Invesdor Group and a "pan-European digital investment and financing platform for companies of all life stages, from startups to large corporations".[909] Invesdor Group claimed to have "a base of over 50,000 registered private and institutional investors from 150 countries".[910]

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902 See the definitions of "payment service" and "payment institution" in points (3) and (4) of Article 4 of Directive 2015/2366/EU (PSD2).

903 Point (15) of Article 4 of Directive 2015/2366/EU (PSD2). See also recitals 27 and 29 of Directive 2015/2366/EU (PSD2) on new types of payment services.

904 For the definition of "account information service", see point (16) of Article 4 and recital 28 of Directive 2015/2366/EU (PSD2).

905 Recitals 31 and 35 of Directive 2015/2366/EU (PSD2).

906 The Economist, Schumpeter. The return of the merchant class, 31 August 2019.

907 Deutsche Börse AG, Celent (2016) pp 15 – 16 on alternative funding platforms.

908 See also FESE (2019) pp 40 – 41 proposing the application of the same rules for the same services and risks based on the principle of technology neutrality.

909 Invesdor, FinTech merger creates Europe's 1st full-scale digital financing and investing platform. Press release, 20 March 2019.

910 *Ibid.*

Interestingly, Invesdor Group also offers a platform as a service to financial service providers such as venture capital or private equity firms. Invesdor Group claims that the platform solves the technical problems of investment transactions, addresses the design of user experience, and manages regulatory compliance. First, Invesdor's platform can manage the issuance of securities, the matching of share subscriptions to money flows, and identifying parties to transactions. Second, the platform can be integrated into a financial services provider's website. Its look and feel can be customised to fit brand guidelines and enable the firm to provide a smooth user experience on its own website. Third, since Invesdor Group has a MiFID II authorisation, the financial service provider using the platform does not necessarily need to have a license of its own in the EU but can benefit from Invesdor's license. A similar service could facilitate the operation of microexchanges by very many issuers.

6.5 Conclusions

Stock markets are a very complex thing. The regulation of such a complex societal context cannot be properly understood without a holistic exercise that requires a broad perspective. You need to look at regulation with its functions in mind and step outside the narrow traditional areas of law.

There are and should be design principles for the regulation of stock markets. Obviously, this is not new. There are issues that must be addressed one way or another when regulating any markets.[911] In this book, we distinguish between policy principles, strategic design principles, and operational design principles. The strategic and operational design principles and the concrete regulation of markets depend on the choice of policy principles that lay down the underlying values.

These design principles probably are much more numerous than the principles that have featured prominently in current legal and regulatory discourse. This is because of two things. On one hand, the design principles developed in Chapter 6 of this book are based on a functional and holistic perspective and are not limited to just one area of law such as company law, exchange law, or securities law. On the other, it is much easier and faster to propose the regulation of complex societal contexts on the basis of simple slogans or narrow economic models.

911 See Ostrom E (2010) p 420.

I prefer the holistic approach, because the application of narrow models that do not take into account externalities can result in extreme societal outcomes. In other words, you need more than references to "the contractual theory of the firm", "shareholder primacy"[912] or "taking into account the interests of all stakeholders"[913] to regulate stock markets in any meaningful way. You need to look at plenty of complex regulation and study its details.

Design principles depend on values. I made my values transparent by laying down policy principles. My policy principles were to foster financial equality, competition, the interests of firms and growth firms, a risk-taking culture, and the use of a back-up system. These policy principles gave reason to choose particular strategic design principles. Had I chosen other policy principles such as fostering financial inequality and the interests of financial elites, I would most likely have ended up with different strategic and operational design principles. Other researchers are now challenged to lay down their values before proposing solutions to stock market regulation or the interpretation of legal norms.

I chose many strategic design principles to reach goals laid down by the policy principles. The following strategic design principles were proposed: interpret the interests of the company as the interests of the firm; focus on the function of controlling shareholders, minority shareholders and retail investors; foster long-termism; facilitate mutual trust; increase the number of firms with publicly-traded shares; reduce costs for issuers, controlling shareholders and retail investors; increase diversity; provide an alternative to financial intermediation; provide an alternative to venture capital; facilitate retail investors' direct equity investments in growth firms; use regulatory dualism; use market practices from angel funding and venture capital as a model for regulation; use best practices from SME market design as a model for regulation; ensure sufficient liquidity; complement retail investors' direct equity investment regime with access to low-cost investment funds; and complement retail investors' direct equity investment regime with a mandatory occupational pension system and social security.

Readers might disagree on the relevance or benefits of one or more of these strategic design principles, or reject all of them. In any case, the most important conclusion to be drawn here is that it is both possible to identify strategic design principles and rational to do so. Moreover, it is rational to use many strategic design principles and not rational to choose overreliance on any particular thing. The three most important strategic design principles proposed here are: foster

912 Hansmann H, Kraakman R (2001) proclaimed that "[t]he triumph of the shareholder-oriented model of the corporation over its principal competitors is now assured".

913 Critically already Mäntysaari P (2012) sections 6.3.3 and 6.3.5.

the interests of the firm, provide an alternative to financial intermediation, and use regulatory dualism.

Depending on the chosen values (policy principles) and the broad goals that reflect the values (strategy principles), it is possible to develop operational design principles that define the more concrete legal tools and practices for the reaching of the chosen objectives. I proposed several operational design principles. They included the following actions: simplify listings and the issuing of shares to the public; simplify periodical reporting and ongoing disclosure obligations; simplify prospectus and disclosure rules for SMEs; limit the national scope of securities law; limit the international scope of securities law; facilitate retail investors' cross-border direct investments; increase cross-listings; facilitate the use of depositary receipts; make it easier for retail investors to take reasonable investment decisions; focus on the incentives of controlling shareholders and retail investors; develop SME exchanges; create microexchanges; create the small public limited-liability company as a new company form; facilitate the pooling of retail investors' private placements; and use financial technology.

Many of the operational aspects may be a matter of preferences and readers might again disagree. I may have got some of them wrong. But they seem at least sufficiently relevant for regulators to focus on.

Most of the operational design principles are ways to improve the existing regulatory regime and might not be new. More radical measures might be necessary in the light of the fact that there are powerful trends keeping successful growth firms private. For this reason, I propose some radical things. A large regime of mutual recognition between the EU and the US could increase the number of foreign companies that retail investors can invest in and reduce the costs of direct cross-border equity investments. The most radical proposals are the microexchange and the small public limited-liability company designed to complement the microexchange. The microexchange could function as a secondary market supporting early-stage funding and crowdfunding, and as a path to a listing on an SME exchange or a main market.

On one hand, the choice of policy principles, strategic design principles, and operational design principles was a subjective exercise. I chose values, and the following choices reflected the chosen values. Regulation is a political and value-based activity even when allegedly scientific arguments are used in the rhetoric to reach political and economic goals. On the other, the proposed design principles were not completely random. They were inspired by an empirical study that

was historical and comparative. Moreover, the proposed design principles complement each other, overlap, make each other stronger, and form a system.[914]

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7 Crowdfunding

7.1 General Remarks

The purpose of this book is to find out what should be done to increase the number of companies with publicly-traded shares and retail investors' direct share ownership. The underlying assumption is that a wider distribution of shares and retail investors' direct share ownership can help to reduce financial inequalities. Crowdfunding was not proposed as a solution in Chapter 6.

In this Chapter, we will study crowdfunding as a potential solution. Could crowdfunding help to increase the number of companies with publicly-traded shares? Could crowdfunding help to increase retail investors' direct equity investments? Are there design principles that regulators should use for this purpose?

Crowdfunding. Crowdfunding consists of several methods of raising funds. The common denominator is the existence of three kinds of participants: a crowdfunding platform; crowdfunding campaign creators; and contributors, that is, the crowd.[1] The innovative aspect of crowdfunding is the use of an Internet-based two-sided platform.

Crowdfunding can help campaign creators such as start-ups to raise funding from retail investors. There is hype: "Through crowdfunding, Main Street has the ability to get involved in an activity previously reserved to Wall Street actors: financing new and emerging business ventures."[2]

However, one may ask whether crowdfunding can help retail investors. On one hand, crowdfunding platforms provide many services that can benefit retail investors. Crowdfunding platforms act as gatekeepers and information intermediaries, broker investments, and provide contracts.[3] On the other, crowdfunding does not seem to be able to provide financial security for retail investors. Only some forms of crowdfunding are investments. Moreover, the volumes of financial return crowdfunding are still low in the EU and the US.[4]

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1 Gabison GA (2015) p 362.

2 Heminway JM (2017) p 193.

3 Hornuf L, Klöhn L, Schilling T (2018) pp 518–519 on the many functions of crowdinvesting platforms.

4 See even Hofmann C (2018) p 229: "The conventional, early-stage crowdfunding model may hold benefits for companies that are barred from or have no reasonably priced access to traditional ways of financing. The model may also pay off for the platforms as long as it generates at least modest returns. However, it is questionable whether non-professional investors should take on disproportionately high risks in exchange for the prospect of rather modest returns."

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Crowdfunding platforms. Crowdfunding platforms are two-sided platforms.[5] To succeed in the long term, they should generate value to both sides.

As intermediaries, crowdfunding platforms provide core and ancillary services.[6] One of the core services in financial retum crowdfunding is linking funding demand and supply, or the demand for funding and the functional equivalents of funding.[7]

The operators of crowdfunding platforms are in the crowdfunding business to make money. There is competition between platform operators. There are already hundreds of crowdfunding platforms just in the EU.[8] Many operators of crowdfunding platforms are start-ups or young firms themselves.

Platform operators can choose between alternative business models.[9] They can charge fees as intermediaries, or obtain part of the issued securities. Where the platform operator is a start-up or a young firm, it needs to focus on increasing the number of users and the size of the platform. Its incentives are short-term as far as any particular issuing is concerned,[10] but long-term as far as the reputation of the platform and the viability of its model are concerned. For traditional financial intermediaries, the operation of a crowdfunding platform can provide cross-selling opportunities. The most important asset in digital economy is user information, which is increased by the scale and scope of the platform. The large number of crowdfunding platforms indicates that there will be consolidation in the future.

Forms of crowdfunding. Funding can be raised in many ways. In broad terms, crowdfunding can take the form of donations, rewards/sponsorship, preselling/pre-ordering, lending, or equity.[11] Crowdfunding instruments can even be hybrid or convertible instruments,[12] or derivatives such as SAFEs.[13]

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5 For the US definition of "platform", see Regulation Crowdfunding, §227.300(4).

6 For the ancillary services of crowdfunding platforms, see Gabison GA (2015) p 363 – 365; Hornuf L, Klöhn L, Schilling T (2018) pp 518 – 519; FCA (2018) paragraph 3.23.

7 In a Swedish government study, the core service was described as follows: "The platform company operates as intermediary, linking capital seekers and investors and enabling them to carry out transactions with each other." SOU 2018:20, Gräsrotsfinansiering: Betänkande av Utredningen om gräsrotsfinansiering, p 29.

8 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.1.

9 FCA (2018) Chapter 3 and Table 1; Zetzsche DA, Preiner C (2018) pp 237 – 238.

10 Hofmann C (2018) p 229.

11 OECD (2015c) pp 82 – 83; UNDP (2017); Hofmann C (2018) p 224. See also Gabison GA (2015) p 363; Williamson JJ (2013) p 2073 on how companies adapted to restrictive SEC rules in the past.

12 Wroldsen JS (2017); Hofmann C (2018) p 225.

In the US, donations used to be the predominant source of crowdfunding financing. Kickstarter and Indiegogo were early crowdfunding platforms for rewards and donations. The issuing of securities fell within the scope of the general securities law regime.

In Europe, crowdfunding is dominated by lending.[14] The UK has the largest domestic crowdfunding market in Europe.[15] However, loan-based crowdfunding in the UK and the US pales in comparison with loan-based crowdfunding in China that is estimated to be larger than loan-based crowdfunding in the UK and the US combined.[16]

Equity-based crowdfunding emerged in Europe before it became legal in the US.[17] However, according to a study by Cambridge Centre for Alternative Finance and University of Agder, the volume of equity-based crowdfunding was still very low in Europe in 2017. The top three countries in equity-based crowdfunding were Finland (€51 m), Sweden (€48 m), and France (€34 m).[18] Such low volumes are a drop in the ocean of equity markets. In Germany, the market leaders for equity crowdfunding between 2012 and 2015 included Seedmatch and Companisto.[19] In 2019, Companisto moved from crowdfunding to curation and the pooling of angel investments (section 6.4.15).

Crowdfunding as a form of funding, consumption or investment. From the perspective of contributors, participating in crowdfunding can be a form of consumption or investment.

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13 Green JM, Coyle JF (2016) p 174: "Of the 96 issuers to launch crowdfunding offerings through August 31, 2016, 30 issuers (approximately 31%) chose to offer convertible securities (such as convertible notes, SAFEs, or similar instruments) to prospective crowdfunding investors. Ninety percent of the convertible securities used were SAFEs." Green JM, Coyle JF (2016) pp 169–170: "Outside of the crowdfunding context, there are situations in which the SAFE may be a sensible instrument for startups to use when fundraising ... [W]e argue that the most promising solution to the problems ... is for the funding portals to remove the SAFE from their menus of financing instruments."

14 SOU 2018:20, Gräsrotsfinansiering: Betänkande av Utredningen om gräsrotsfinansiering, p 117, citing Cambridge Centre for Alternative Finance.

15 *Ibid*., p 118.

16 *Ibid*., p 107.

17 Gabison GA (2015) p 363.

18 Ziegler T, Sneor R, Wenzlaff K, Odorović A, Johanson D, Hao R, Ryll L (2019) p 35.

19 Between 7 June 2012 and 27 April 2015, Seedmatch and Companisto accounted for around 75% of the total equity crowdfunding capital raised in Germany according to Dorfleitner G, Hornuf L, Weber M (2017).

Donations, rewards, and the purchase of products can only be regarded as a form of consumption.[20] Many contributors are not looking for financial security. Sponsoring an exciting project or pre-ordering new things may be a form of self-fulfilment and bring social rewards. For issuers, donations and rewards can be easier to organise, because the issuing of securities tends to be constrained by securities laws.

Only lending and equity crowdfunding can be investments. Crowdfunding does not provide a very good form of investment at the moment. The volume of investment crowdfunding is low. Investment crowdfunding can be regarded as a marginal phenomenon in Europe and the US.[21] Even if crowdfunding grew at a very high speed, the amount of funds that could be raised through crowdfunding would be marginal in the light of the large financing needs of SMEs in the foreseeable future.

Because of the very high failure rate of start-ups[22] and the absence of a secondary market, equity crowdfunding is akin to sponsoring or gambling that are forms of consumption.[23]

Loan-based instruments can be expected to be more suitable for retail investors. However, loan-based crowdfunding or convertible instruments will not work for technology start-ups that focus on growth (see section 7.4) and crowdfunding contributors will not get a share of the rising value of successful start-ups unless they invest in stocks.[24]

From the perspective of a start-up or an aspiring entrepreneur, crowdfunding can be a form of funding regardless of the choice between donations, preselling, loans, or equity, and regardless of the fact that the overall volumes are low. Moreover, the firm may benefit from the contributors' ancillary services regardless of the form of crowdfunding. In non-equity crowdfunding, non-shareholders can help to create hype, increase business, and act as a low-powered monitoring mechanism through social media. Contributors provide similar ancillary services in equity crowdfunding.

20 See Gabison GA (2015) p 368 on how contributors can invest because of many non-financial reasons. See also Chiu IHY, Greene EF (2019) on sustainable and social finance projects.

21 Ziegler T, Sneor R, Wenzlaff K, Odorović A, Johanson D, Hao R, Ryll L (2019).

22 Gilson RJ (2003) p 1076; Klöhn L, Hornuf L, Schilling T (2016); Hofmann C (2018) p 228: "The risk of total or substantial losses is very real as nascent companies are subject to high failure rates. Data from the Singaporean Department of Statistics reveals that only about 50% of start-ups survive to their 5th year."

23 It is customary to regard equity crowdfunding as a form of investment. See, for example, Zetzsche DA, Preiner C (2018) pp 221–222.

24 See, for example, Herdrich N (2015).

Crowdfunding might therefore increase the number of start-ups. With some luck, some of them will grow into successful firms.[25] This said, much more than crowdfunding would be needed to increase the number of companies with publicly-traded shares, retail investors' direct equity investments in growth firms, and reasonable long-term investment opportunities.[26]

The regulation of securities-based crowdfunding. The regulatory framework of securities-based crowdfunding consists of external rules and the platform's internal rules.

External rules depend on the country. Securities-based crowdfunding may be constrained by general restrictions on the right to solicit funds from the public and by prospectus requirements that are triggered when securities are issued to the public.[27] The operation of a crowdfunding platform may be a regulated activity[28] and require an authorisation or registration, compliance with minimum capital requirements, the filing of information with the regulatory authorities, and disclosures to customers.[29]

External rules are complemented by internal rules. The operator of a crowdfunding platform makes its own rules. Platform users cannot use the platform unless they accept the operator's rules. In addition to facilitating transactions on the platform, the platform operator's rules can help to prevent fraud and increase trust.

Both the US government and the EU have recognised the potential benefits of crowdfunding. Regulation has nevertheless been influenced by the unclear nature of crowdfunding. In a 2014 Communication,[30] the European Commission listed the lack of regulatory transparency as the source of key challenges for

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25 See also FESE (2018) on the FESE's position: "Crowdfunding can be a positive element for enterprise funding in general and for reviving public corporate financing, especially since it can help: • Grow the pipeline of companies preparing for an IPO; • Build a stronger equity culture in Europe, which would eventually have a positive impact on the participation of retail investors in public equity markets, which is positively correlated with better access of SMEs to IPOs; and, • Revive the local ecosystems necessary for IPOs of smaller companies."

26 *Ibid.:* "To fully meet the needs of European companies, with a focus on those that have the highest contribution to job growth, the EU needs to continue working on a comprehensive strategy on how to boost equity financing at all stages of the funding escalator."

27 Hofmann C (2018) p 236 on the prospectus requirement under Singapore law and how companies prefer to avoid it.

28 See *ibid.*, pp 233–234 on licensing requirements under Singapore's Securities and Futures Act (SFA).

29 See *ibid.*, p 239.

30 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final.

crowdfunding in the EU.[31] In the US, equity crowdfunding used to be an illegal activity under securities law[32] before the adoption of Regulation Crowdfunding.[33]

One may ask whether, or to what extent, it would be meaningful to apply to crowdfunding transactions standards generally applicable to securities investments.

In this Chapter, we will study the regulation of crowdfunding in the EU (section 7.2) and the US (section 7.3) as well as crowdfunding practices (section 7.4). Moreover, we will propose some design principles for the crowdfunding market (section 7.5).

7.2 The Regulation of Securities-Based Crowdfunding in the EU

Generally, there is a choice between regulating either crowdfunding products or platforms. If crowdfunding products fall within the scope of complex piece-meal regulation, crowdfunding can be hampered. The same can be said of the piece-meal regulation of crowdfunding functions. Crowdfunding levels can be increased by regulating crowdfunding platforms or the operators of crowdfunding platforms rather than products or functions.[34] Since the operator of the platform acts as a gatekeeper, it is regarded as the most efficient focal point of regulation.[35] Regulating platforms or platform operators would require focusing on authorisation and prudential requirements.

European financial markets generally are regulated on a piece-meal basis.[36] Crowdfunding could therefore fall within the scope of various pieces of European legislation each designed to address a particular sector or context.

31 *Ibid.*, section 3.1. See also Gabison GA (2015) pp 360 – 361.

32 Williamson JJ (2013) p 2073; Kitch EW (2014) p 892.

33 SEC Release No. 33 – 9974 (Oct. 30, 2015) (Regulation Crowdfunding).

34 Zetzsche DA, Preiner C (2018) p 237.

35 See *ibid.*, pp 238 – 239; Klöhn L, Hornuf L, Schilling T (2016): "[A]s classic gatekeepers, funding portals offer excellent regulatory access to ensure that the market functions properly. That is why their duties are one cornerstone of the CROWDFUND Act and the UK equity crowdfunding regulation."

36 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 3.1.2; Gabison GA (2015) p 376 – 386; Zetzsche DA, Preiner C (2018) p 230.

The Member States of the EU have regulated equity crowdfunding in different ways in their national laws.[37] Some differences exist due to the fact that equity crowdfunding can fall within the scope of many EU directives and the Member States have some discretion when implementing EU directives in national law.

The piece-meal approach to regulation and differences between national laws have hampered cross-border crowdfunding transactions in the EU.[38] In fact, crowdfunding has largely been a local activity. The volume of cross-border equity crowdfunding in the EU was mere €1.8 million in 2014.[39]

The European Commission did not want to regulate crowdfunding too early. In its 2014 Communication, the European Commission stated that "[t]he EU should strike a careful balance between the objectives of investor protection and continued expansion of crowdfunding. Premature regulation could hamper, not foster, the growth of this fast-growing and innovative funding channel."[40] Moreover, the European Commission said that "[t]he main issues EU legislation addresses with regards to all types of crowdfunding include anti-money laundering, advertising, consumer protection and – where relevant – intellectual property protection".[41] Different national rules might be in place where EU legislation does not apply: "This is the case in particular for charitable giving and donations, rewards-based and pre-sales models of crowdfunding."[42]

In March 2018, as part of its FinTech Action plan[43], the European Commission presented a proposal for a Regulation on European Crowdfunding Service Providers (ECSP) for Business.[44] In the impact assessment that accompanied the 2018 proposal, the Commission recognised that EU crowdfunding markets for business finance were both underdeveloped compared to other major economies and unable to properly operate cross-border. Crowdfunding platforms were unable to scale up and freely provide their services on a pan-European level due to fragmented and conflicting regulatory regimes. Investors refrained from en-

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37 See Government Bill 46/2016 on the Finnish Crowdfunding Act, section 2.2.1; SOU 2018:20, Gräsrotsfinansiering: Betänkande av Utredningen om gräsrotsfinansiering, Chapter 4; Klöhn L, Hornuf L, Schilling T (2016) on German law.

38 See European Crowdfunding Network AISBL (2017).

39 Zetzsche DA, Preiner C (2018) p 228.

40 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 1.1.

41 *Ibid.*, section 3.1.1.

42 *Ibid.*, section 3.1.1.

43 FinTech Action plan: For a more competitive and innovative European financial sector. Communication from the commission COM (2018) 109 final.

44 Proposal for a Regulation of the European Parliament and of the Council on European Crowdfunding Service Providers (ECSP) for Business, COM(2018) 113 final.

gaging cross-border due to a lack of trust in those platforms and the fragmented regulatory frameworks.[45]

We can have a look at the piece-meal regulatory framework before turning to the sector-specific regulation of crowdfunding platforms in the EU.

Electronic commerce, consumer protection. There is a large regulatory framework for the protection of consumers in digital economy in the EU.

According to the European Commission,[46] "platforms charging money to successfully financed projects may engage in e-commerce and thus fall under the e-Commerce Directive. The Directive on misleading and comparative advertising provides minimum harmonisation for misleading marketing practices in a business to business context. Consumers are protected against misleading and aggressive crowdfunding practices by the Directive on unfair commercial practices, prohibiting certain marketing practices. If standard terms and conditions used by crowdfunding operators contain unfair clauses, then these are not binding on participating consumers under the Unfair Contract Terms Directive."[47]

In business-to-consumer transactions, the trader must comply with disclosure duties under the e-Commerce Directive and the Consumer Rights Directive.[48]

In 2019, the EU adopted two new consumer protection directives. The Sale of Goods Directive[49] applies to "sales contracts between a consumer and a seller". According to its wording, the Sale of Goods Directive can thus apply to crowdfunding pre-ordering or pre-selling. The Digital Content Directive[50] does not apply to financial services.[51]

Donations. Donations can take many forms. First, there can be calls to the public to supply non-monetary contributions to the realisation of a project. For example, the crowd may be asked to contribute with their skills to make a movie project happen. Second, there can be monetary contributions.

45 *Ibid*., Explanatory memorandum, section 3.

46 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 3.1.1.

47 The cited directives were Directive 2000/31/EC (Directive on electronic commerce); Directive 2006/114/EC (Directive concerning misleading and comparative advertising); Directive 2005/29/EC (Directive concerning unfair business-to-consumer commercial practices); Directive 93/13/EEC (Directive on unfair terms in consumer contracts).

48 Directive 2011/83/EU (Directive on consumer rights).

49 Directive (EU) 2019/771 (Directive on certain aspects concerning contracts for the sale of goods).

50 Directive (EU) 2019/770 (Directive on certain aspects concerning contracts for the supply of digital content and digital services).

51 Recital 30 and point (e) of Article 3(5) of Directive (EU) 2019/770 (Digital Content Directive).

There can be legal restrictions on donations in the form of monetary contributions depending on the Member State. This can be illustrated with Finnish law. Under Finnish law, you need a permit to solicit funds from the public in the form of donations. The permit is not available for commercial purposes or to an individual.[52] Sales or pre-sales are thus legally safer. For compliance reasons, it would be necessary to ensure that the price does not include any donation element. For example, the absence of a minimum price and the freedom of contributors to choose the price would be regarded as a donation. In practice, the regulation of donations has made it difficult for large crowdfunding marketplaces such as Kickstarter to operate in Finland. The Finnish Crowdfunding Act of 2016 only applies to securities-based crowdfunding.

Financial return crowdfunding. There are restrictions on financial return crowdfunding such as crowdlending and equity crowdfunding. In the EU, these forms of crowdfunding are governed by a very fragmented regulatory framework.

In its 2014 Communication,[53] the European Commission listed the most important pieces of EU legislation that might apply to financial return crowdfunding. They included what are now the Prospectus Regulation, the Payment Services Directive (that might apply to crowd sponsoring depending on the business model), MiFID II, the Capital Requirements Directive (CRD IV) and Regulation (CRR), the Directive on Alternative Investment Fund Managers (AIFMD), the Consumer Credit Directive, the Directive on the Distance Marketing of Financial Services, the European Venture Capital Regulation (EuVECA), and the Regulation on European Social Entrepreneurship Funds (EuSEF).[54] There are additional rules at national level.

Securities-based crowdfunding platforms generally can be authorised under MiFID II and benefit from a passport to carry out regulated services and activities throughout the EU.[55]

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52 Section 6 of lag om penninginsamlingar (255/2006).

53 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 3.1.2.

54 Regulation 2017/1129 (Prospectus Regulation); Directive 2015/2366/EU (PSD2); Directive 2014/65/EU (MiFID II), Directive 2013/36/EU (CRD IV), Directive 2011/61/EU (Directive on Alternative Investment Fund Managers), Directive 2008/48/EC (Directive on credit agreements for consumers), Directive 2002/65/EC (Directive concerning the distance marketing of consumer financial services), Regulation 575/2013 (CRR), Regulation 345/2013 (Regulation on European venture capital funds, EuVECA); Regulation 346/2013 (Regulation on European social entrepreneurship funds, EuSEF).

55 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 1.1. In the US, each Regulation Crowdfunding offering

The offering of shares to the public in the EU is constrained by prospectus requirements. According to the Prospectus Regulation, “securities shall only be offered to the public in the Union after prior publication of a prospectus”.[56] According to the wording of the Prospectus Regulation, that provision even covers the offering of other securities such as debt instruments to the public.[57] However, there is an exemption from the prospectus requirements for small offerings of securities. There must be no prospectus requirements where the total consideration in the EU is less than €1 million over a period of 12 months,[58] up from €100,000 under the earlier Prospectus Directive.[59] Member States must not require a prospectus for smaller offerings but “may require other disclosure requirements at national level to the extent that such requirements do not constitute a disproportionate or unnecessary burden”.[60]

The operation of crowdfunding platforms before the adoption of the ECSP Regulation. Building on MiFID II, the European Commission launched its Capital Markets Union (CMU) action plan in September 2015[61] and started work on concrete actions.[62] The Commission explored the possibilities and risks of crowdfunding in order to find out whether European-level policy action in this field is needed.[63] In its Green Paper, the Commission briefly mentioned crowdfunding.

As regards the financing of the start-up phase, the CMU action plan mentioned “an increasing variety of non-bank financing options” ranging from “money-lending and donor platforms, businesses trading their invoices, peer-to-peer lending, to investment-based crowdfunding or support from business angels”.[64] However, the action plan did not say how they should be developed.

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must be exclusively conducted through one online platform. The intermediary operating the platform must be a broker-dealer or a funding portal that is registered with the SEC and FINRA.

56 Article 3(1) of Regulation 2017/1129 (Prospectus Regulation).

57 Article 1(1) of Regulation 2017/1129 (Prospectus Regulation).

58 First subparagraph of Article 1(3) of Regulation 2017/1129 (Prospectus Regulation).

59 Point (e) of Article 3(2) of Directive 2003/71/EC of (Prospectus Directive).

60 Second subparagraph of Article 1(3) of Regulation 2017/1129 (Prospectus Regulation).

61 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final.

62 Capital Markets Union – Accelerating Reform. Communication from the Commission, COM(2016) 601 final.

63 Crowdfunding in the EU Capital Markets Union. European Commission, Commission Staff Working Document, SWD(2016) 154 final.

64 Action Plan on Building a Capital Markets Union, section 1.1.

The 2018 proposal for an ECSP Regulation was part of the European Commission's FinTech Action plan of 2018.[65] According to this action plan, the proposed Regulation was designed to address the problem that the lack of a common EU framework "hinders the ability of crowdfunding providers to scale-up within the Single Market mainly due to conflicting approaches to national supervision and regulation". Providing an EU-level framework was intended to "ensure the possibility to passport crowdfunding activities throughout the internal market".[66]

To complement the ECSP Regulation, the Commission also adopted a proposal for a directive amending MiFID II.[67] The purpose of the directive was to exclude from the scope of MiFID II crowdfunding service providers that are authorised under the ECSP Regulation.

The operation of crowdfunding platforms after the adoption of the ECSP Regulation. The ECSP Regulation was adopted by the European Parliament in October 2020 and applies from 10 November 2021.[68] In the light of the ECSP Regulation, there are three main kinds of crowdfunding service providers established in the EU. First, there are crowdfunding service providers that provide services in the home country under the applicable national regulatory regime. Second, there are crowdfunding service providers authorised to provide services under applicable national law where the activities are covered by MiFID II in that Member State.[69] Third, there are crowdfunding service providers authorised under the ECSP Regulation.

The ECSP Regulation lays down a set of rules for crowdfunding services in the EU. The ECSP Regulation applies to lending-based and investment-based crowdfunding.[70]

The ECSP Regulation applies to all European Crowdfunding Service Providers (ECSP) up to offers of €5 million, calculated over a period of 12 months per project owner.[71] The Commission had originally proposed a limit of €1 million

65 FinTech Action plan: For a more competitive and innovative European financial sector. Communication from the Commission, COM(2018) 109 final.

66 Proposal for a Regulation of the European Parliament and of the Council on European Crowdfunding Service Providers (ECSP) for Business. COM(2018) 113 final, Explanatory memorandum, section 2.

67 Proposal for a Directive of the European Parliament and of the Council amending Directive 2014/65/EU on markets in financial instruments, COM(2018) 99 final.

68 Article 51 of Regulation (EU) 2020/1503 (ECSP Regulation).

69 Unleashing the potential of Crowdfunding in the European Union. Communication from the Commission, COM(2014) 172 final, section 1.1.

70 Recital 1 of Regulation (EU) 2020/1503 (ECSP Regulation).

71 Point (c) of Article 1(2) of Regulation (EU) 2020/1503 (ECSP Regulation).

and the Economic and Monetary Affairs Committee had wanted to expand the scope of the ECSP by increasing the maximum threshold for each crowdfunding offer to €8 milllion. The threshold of €1 million is used both in the Prospectus Regulation (with no prospectus requirements where the total consideration in the EU is less than €1 million over a period of 12 months)[72] and the Listing Directive (with a market capitalisation requirement of at least €1 million for companies that seek official listing).[73] This makes the threshold of €5 million significant.[74]

Firms that use the crowdfunding option can be public limited-liability companies. However, to enable small companies or start-ups to use the crowdfunding option, even certain private limited-liability companies can benefit from it. The shares of such private limited-liability companies must be freely transferable.[75]

The ECSP Regulation is designed to protect investors in four main ways relating to authorisation, disclosures, education, and liability.

First, Member States are responsible for authorising and supervising European Crowdfunding Service Providers (ECSPs) under national law. A prospective ECSP needs to request authorisation from the national competent authority of the Member State in which it is established.[76] Through a notification procedure, an ECSP can provide its services cross-border in other Member States.[77]

Second, the ECSP Regulation regulates disclosures to investors. A key investment information sheet (KIIS) is to be provided to investors for each crowdfund-

72 First subparagraph of Article 1(3) of Regulation 2017/1129 (Prospectus Regulation).

73 Article 43(1) of Directive 2001/34/EC (Listing Directive).

74 According to FESE's position paper, a threshold higher than one million euros was problematic. FESE (2018): "[I]f the ECSP provides crowdfunding offers that are above EUR 1 000 000, ECSPs and project owners using their platforms will be subject to the provisions included in the Prospectus Regulation. Indeed, the definition of the 'crowdfunding offer' … will overlap with the definition of 'an offer of securities to the public' … thereby putting ECSPs into the scope of both regimes simultaneously. This will drastically reduce the legal clarity for the informational requirements needed for 'crowdfunding offers' issued by ECSPs in the scope of the Crowdfunding Regulation, notably when it is proposed that ECSPs provide lending and equity based crowdfunding services. Furthermore, if such a change were to be agreed, NCAs' flexibility to exempt public offers from prospectus requirements would be undermined. Currently, their flexibility relies on their respective powers to exempt public offer of securities from the obligation to publish a prospectus within their jurisdiction by providing a tailored threshold based on their local ecosystems."

75 Points (m) and (n) of Article 2(1) of Regulation (EU) 2020/1503 (ECSP Regulation).

76 Article 12 of Regulation (EU) 2020/1503 (ECSP Regulation).

77 Article 18 of Regulation (EU) 2020/1503 (ECSP Regulation).

ing offer.[78] For example, the KIIS must contain information about the project selection criteria, financial risks, insolvency risks, and charges related to the investment. The key investment information sheet (KIIS) is drawn up by the project owner for each crowdfunding offer, or at platform level.

Third, the ECSP Regulation requires some investor education and nudging to improve investor decision-making. Investors identified as non-sophisticated must be offered more in-depth advice and guidance, including on their ability to bear losses and a warning in case their investment exceeds either €1,000 or five per cent of their net worth, followed by a pre-contractual reflection period of four calendar days.[79] The thresholds are very low but do not restrict the size of investment.

Fourth, the ECSP Regulation makes at least the project owner or its administrative, management or supervisory bodies responsible for the information given in a key investment information sheet.[80] Moreover, the Regulation requires Member States to ensure that civil liability applies.[81]

The ECSP Regulation seems necessary. Common rules can help to increase crowdfunding activity in the EU and reduce barriers to cross-border transactions. Improved access to crowdfunding can help some start-ups at the early stage of development. Moreover, crowdfunding can help to build local ecosystems including advisory services that can benefit start-ups and growth firms in general. Crowdfunding might contribute to a stronger equity culture in the EU.

This said, the ECSP Regulation will not be enough to significantly increase the number of growth firms and companies with publicly-traded shares. This was summed up by FESE in its position on the proposal for a ECSP Regulation: "The capital pooled by crowdfunding platforms remains limited when compared to the capital raised on public markets. In particular, the companies that have the biggest impact on job growth are those at the high end of the funding escalator scale, which means that, even if crowdfunding growth trends continue, this may have only a modest impact on new jobs created in Europe. Furthermore, the visibility ensured by raising capital via crowdfunding is still quite limited and this reflects on the ability of companies to then be able to recruit high profile employees. To fully meet the needs of European companies, with a focus on those that have the highest contribution to job growth, the EU needs to continue work-

78 Article 23 of Regulation (EU) 2020/1503 (ECSP Regulation).

79 Recitals 42–47 and Articles 21–22 of Regulation (EU) 2020/1503 (ECSP Regulation).

80 Article 23(9) of Regulation (EU) 2020/1503 (ECSP Regulation).

81 Article 23(10) of Regulation (EU) 2020/1503 (ECSP Regulation).

ing on a comprehensive strategy on how to boost equity financing at all stages of the funding escalator."[82]

The provisions of the ECSP Regulation on investor protection are necessary to guard against the loss of public confidence in crowdfunding and capital markets in general.[83] However, no such provisions will change the high-risk nature of equity crowdfunding.

Conclusion. The regulation of crowdfunding has been very fragmented in the EU in the past. EU securities law generally is based on a piece-meal approach. The core pieces of EU law include MiFID II and the Prospectus Regulation. EU law is complemented by Member States' national laws. Combined with the principle of subsidiarity, the existence of national regulation has made it more difficult to adopt a common regulatory framework for crowdfunding. The ECSP Regulation creates a regulatory framework for cross-border investment crowdfunding.

7.3 The Regulation of Securities-Based Crowdfunding in the US

The starting point of the regulation of securities-based crowdfunding in the US is the very wide scope and expansive interpretation of the Securities Act of 1933 and the Securities Exchange Act of 1934.

The Securities Act bans offers to sell or buy securities without a registration statement.[84] Anyone offering securities to the public must first prepare a registration statement with the SEC and make that statement available "under such regulations as the [SEC] may prescribe".[85] Putting information about an issue of securities up on a website falls within the scope of the general solicitation ban under the 1933 Act.[86]

Anyone acting as a broker must be registered under Section 15 of the Securities Exchange Act. Any person who operates a website offering securities for sale on behalf of an issuer falls within the expansive definition of broker in the 1934 Act.[87]

82 FESE (2018).
83 *Ibid.*
84 Section 5 of the Securities Act of 1933.
85 Section 6(d) of the Securities Act of 1933.
86 See Kitch EW (2014) p 888; Heminway JM (2017) p 196.
87 Kitch EW (2014) p 888.

The Securities Act of 1933 used to hamper the funding of early-stage ventures. Since registration is expensive and time-consuming, smaller growth firms needed to rely on an exemption to raise capital.[88] For example, under Rule 506 of Regulation D, they could seek funding from "accredited investors" such as wealthy individuals through private placements and without going public.[89] However, they were not allowed to advertise the sale of their stock in public. The ban on general solicitation prevented startups from promoting their companies and seeking investors via online platforms.[90]

The Jumpstart Our Business Startups (JOBS) Act of 2012 made it easier for companies to raise capital privately, stay private longer, or go public:

- Title I of the JOBS Act exempted "emerging growth companies"[91] from certain disclosure duties and other obligations.
- Title IV of the JOBS Act directed the SEC to adopt rules exempting from the registration requirements of the Securities Act offerings of up to $50 million of securities annually.[92]
- Title II of the JOBS Act restricted the scope of the general solicitation ban. It removed the ban on general solicitation provided that only accredited investors are solicited and there are reasonable steps to verify that the purchasers are accredited investors.[93] In other words, Title II facilitated online investing subject to certain constraints. Title II resembles angel investing and is regarded as a success.[94]

88 For US law before the JOBS Act of 2012, see Burkett E (2011). Williamson JJ (2013) p 2071.
89 Williamson JJ (2013) p 2072.
90 See, for example, Catalini C, Fazio C, Murray F (2016) p 4.
91 Section 101(a) of the JOBS Act added Section 2(a)(19) to the Securities Act of 1933 as follows: "(19) The term 'emerging growth company' means an issuer that had total annual gross revenues of less than $1,000,000,000 ..." The thresholds are indexed for inflation. Section 101(b) of the JOBS Act added a similar Section 3(a)(80) to the Securities Exchange Act of 1934.
92 Section 401 of the JOBS Act added Section 3(b)(2) to the Securities Act of 1933. The SEC adopted the necessary rules in Regulation A+ that expanded the earlier Regulation A. SEC Release Nos. 33 – 9741; 34 – 74578; 39 – 2501 (Amendments for Small and Additional Issues Exemptions under the Securities Act) (Regulation A).
93 Section 201(a) of the JOBS Act; SEC Release No. 33 – 9415; No. 34 – 69959 (September 23, 2013) (Eliminating the Prohibition Against General Solicitation and General Advertising in Rule 506 and Rule 144A Offerings).
94 Ibrahim DM (2015) pp 565 and 582: "Title II platforms are simply taking advantage of the Internet to reduce the transaction costs of traditional angel and VC operations and add passive angels to their networks at a low cost ... Title II sites are replicating angel risk-reduction mechanisms in an online setting."

- Title III of the JOBS Act is also known as the CROWDFUND Act.[95] It has been called a paradigm shift.[96] Title III opened up online investing even for unaccredited investors such as retail investors. Title III achieved this by adding an exemption from registration for certain crowdfunding transactions[97] and by permitting equity crowdfunding.[98] In particular, "emerging growth companies" were permitted to engage in crowdfunding while remaining exempt from registration requirements.[99]

Title III created a special exemption from the requirements of the Securities Acts. To implement the exemption, the SEC adopted Regulation Crowdfunding in 2015.[100]

Regulation Crowdfunding prescribed rules governing the offer and sale of securities under the new Section 4(a)(6) of the Securities Act of 1933 and provided a framework for the regulation of registered funding portals and brokers that issuers are required to use as intermediaries in the offer and sale of securities in reliance on Section 4(a)(6).

Regulation Crowdfunding provided a regulatory framework for securities crowdfunding by (i) permitting individuals to invest in the securities of an issuer, subject to certain investment limitations, (ii) capping the funds that may be raised by an issuer under crowdfunding at $1 million (with later inflation adjustments) in a 12-month period, (iii) requiring issuers to disclose certain information about their business and offerings, including in an offering statement and annual reports, and (iv) providing a regulatory framework for intermediaries that operate the crowdfunding platform or otherwise facilitate the crowdfunding. Such intermediaries include registered brokers and funding portals.

Regulation Crowdfunding did not limit the scope of other exemptions. The issuer is permitted to rely on other securities exemptions such as Regulation D as well. However, the Title III and Regulation Crowdfunding exemption is limited and includes complex disclosure and filing provisions.[101]

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95 The Capital Raising Online While Deterring Fraud and Unethical Non-Disclosure Act.

96 Ibrahim DM (2015) p 587.

97 Section 302 of the JOBS Act added Section 4(a)(6) to the Securities Act of 1933.

98 SEC Release No. 33–9974 (Oct. 30, 2015) (Regulation Crowdfunding). The release adopting inflation adjustments to the dollar amount thresholds in Regulation Crowdfunding is SEC Release No. 33–10332 (March 31, 2017).

99 Williamson JJ (2013) p 2074.

100 See Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers (May 13, 2016) prepared by the staff of the SEC; Heminway JM (2017) pp 197–198.

101 See Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers (May 13, 2016) prepared by the staff of the SEC; Kitch EW (2014) pp 891–892.

The Title III and Regulation Crowdfunding exemption is not available to all companies. The exemption is only available to US companies. Non-US companies are not eligible to use the exemption. Certain US companies are excluded from the exemption. For example, Title III prohibited "investment companies" from operating under the Act, preventing companies that make investments for others from offering mutual fund-type crowdfunding products.[102]

Each Regulation Crowdfunding offering must be exclusively conducted through one online platform. The issuer cannot conduct a crowdfunded offering on its own. The intermediary operating the platform must be a broker-dealer or a funding portal registered with the SEC and FINRA. A website operator could thus satisfy its obligation to register as a broker under Section 15 of the Securities Exchange Act by qualifying as a "funding portal".[103]

A funding portal is not allowed to: offer investment advice or recommendations; solicit purchases, sales or offers to buy the securities on its platform; compensate employees, agents or other persons for solicitation or based on the sale of securities displayed on its platform; hold, manage, possess or otherwise handle investor funds or securities; or engage in such other activities as the SEC, by rule, determines appropriate.

Since a funding portal cannot handle investor funds, it must direct investors to transmit their funds directly to a qualified third party, which may be a registered broker-dealer or qualifying bank or credit union. A funding portal may nevertheless engage in back-office or other administrative functions other than on the platform.

Congress narrowed the scope of the exemption by limitations on both the amount of securities a single issuer could sell and the amount of securities that could be sold to a single investor under the crowdfunding exemption. An exempted offering must be for less than $1 million during any twelve-month period (with later inflation adjustments).[104] There is an investment limit depending on the annual income and net worth of the individual investor. No buyer may

102 Section 302(b) of the JOBS Act; Williamson JJ (2013) p 2075.

103 Kitch EW (2014) p 892: "The newly proposed regulation on funding portals requires that they become members of the Financial Industry Regulatory Authority, something that few operators of websites will find it feasible to do."

104 After April 5, 2017 updates to reflect inflation adjustments to the dollar amount thresholds) a company issuing securities in reliance on Regulation Crowdfunding was permitted to raise a maximum aggregate amount of $1,070,000 in a 12-month period.

purchase an amount in excess of 10 percent of his or her annual income or net worth.[105]

Neither the JOBS Act nor Regulation Crowdfunding included explicit restrictions on the types of securities that issuers could sell in crowdfunding offerings. To foster market development, the SEC declined to narrow the list of instruments that companies could offer crowdfunding investors. As a result, "startups looking to raise capital through crowdfunding have had free rein to choose whichever instruments they believe best fit their needs".[106]

The JOBS Act and Regulation Crowdfunding restrict resales. Resales of securities acquired in an offering conducted using the crowdfunding exemption are prohibited for a one-year period following the date on which the securities are purchased, with certain exceptions.[107] The resale restrictions are clarified by Rule 501 of Regulation Crowdfunding. The resale restrictions have been regarded as controversial. Resale restrictions may hamper the development of a liquid trading market for the affected securities.[108]

A crowdfunding intermediary is permitted to have a financial interest in an issuer on its platform under certain circumstances. This is the case where the securities are a form of compensation and of the same class as the offered securities: The intermediary receives the financial interest from the issuer as compensation in connection with the crowdfunding transaction, and the financial interest consists of securities of the same class and having the same terms, conditions and rights as those being offered in the crowdfunding transaction.

A crowdfunding intermediary has duties to protect investors from fraud. First, the intermediary must have a reasonable basis for believing that an issuer complies with Section 4A(b) of the Securities Act of 1933 and has established means to keep accurate records of its security holders. Second, an intermediary must deny access to its platform to an issuer if the intermediary has a reasonable basis for believing that the issuer is a "bad actor", or has a reasonable basis for believing that the issuer or the offering presents the potential for fraud or otherwise raises concerns about investor protection. Third, an intermediary must deny access to its platform if it reasonably believes that it is unable to adequately or effectively assess the fraud risk connected to the issuer or its proposed offering.

A crowdfunding intermediary must disclose information to protect investors. For example, an intermediary must:

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105 Kitch EW (2014) p 892; Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers (May 13, 2016) prepared by the staff of the SEC.

106 Green JM, Coyle JF (2016) pp 170 – 171.

107 Heminway JM (2017) p 198.

108 *Ibid.*, pp 200 – 202.

- provide investors with transaction and educational materials, including disclosures relating to risk and resale restrictions;
- disclose on its platform the compensation and promotional activities of any promoter, founder or employee of an issuer;
- disclose the manner in which the intermediary is compensated for the crowdfunded transaction;
- make available information required to be provided by the issuer, including an offering statement and progress updates;
- have a reasonable basis that the investor satisfies the investment limitations under Regulation Crowdfunding and obtain certain investor qualification materials and representations from the investor;
- provide communication channels on its platform so that potential investors can communicate with each other and with representatives of the issuer; and
- abide by certain rules relating to investment notices, completion of offerings, cancellations and reconfirmations.

Conclusion. The JOBS Act of 2012 and Regulation Crowdfunding facilitated the operation of crowdfunding platforms and made equity crowdfunding legal. Retail investors are protected by disclosures, caps, and a one one-year holding requirement for crowdfunded securities.

For issuers, Regulation Crowdfunding reduced the costs of regulatory compliance in securities offerings. However, compliance costs remain higher compared with a traditional private placement under Regulation D. Generally, Congress regards the JOBS Act of 2012 as an example of good regulation that eases regulatory burdens, increases regulatory certainty, and encourages entrepreneurs and startups.[109]

7.4 Some Crowdfunding Practices

The crowdfunding market has adapted to regulation and developed crowdfunding instruments and standard-form contracts.[110] Crowdfunding practices should be taken into account when choosing design principles for the regulation of crowdfunding (section 7.5) and could be taken into account when developing de-

109 The 2017 Joint Economic Report (115th Congress), Chapter 6, pp 122–137, at p 133.
110 Williamson JJ (2013) p 2073; Wroldsen JS (2013) p 627; Hornuf L, Klöhn L, Schilling T (2018) on German crowdfunding practices.

sign principles for the proposed microexchange (Chapter 8). We can have a look at some crowdfunding practices.

Many core services on crowdfunding platforms. The operators of crowdfunding platforms obviously play a central role.[111] The core service on a crowdfunding platform consists of linking projects and contributors. There are even other core services necessary to make a two-sided digital platform work. In particular, rational choice can be helped by curation.

The services of the operators of crowdfunding platforms have been described as follows: "They act as gatekeepers because they decide which start-ups can run crowdfunding campaigns on their platforms ... Furthermore, these platforms are information intermediaries because they evaluate start-ups, stipulate what information they have to provide to investors, and channel communications between investors and businesses in an investor-relations portal. Finally, they are drafters of contracts because they develop the contracts that are concluded between investors and businesses."[112]

Users may thus choose the services of crowdfunding platforms for many reasons. According to Gabison, platforms remove some of the stigma associated with asking friends and family for money, signal the legitimacy of the project, reassure contributors, and give creators a place to publicise their projects and reach a broader network.[113] There has been little detected fraud in crowdfunding.[114]

Standard form contracts. All products offered on the crowdfunding platform are designed by the platform operator. Moreover, crowdfunding websites customarily provide standard form contracts to be used by issuers and investors. Since standard form contracts can reduce transaction costs and legal risk, they can contribute to the fast convergence of practices. For example, the platform operator's standard contracts are used for every offering on German platforms.[115]

In the US, contracts and instruments have been influenced by incubator, angel, and venture capital practices.[116] Issuers were given plenty of discretion in the JOBS Act of 2012. The JOBS Act and the SEC's regulatory practices fostered market development by keeping the list of instruments that companies could

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111 Wroldsen JS (2017); Hornuf L, Klöhn L, Schilling T (2018) p 519.
112 Hornuf L, Klöhn L, Schilling T (2018) pp 518 – 519.
113 Gabison GA (2015) pp 363 – 365.
114 Cumming DJ, Hornuf L, Karami M, Schweizer D (2016).
115 Hornuf L, Klöhn L, Schilling T (2018) p 519.
116 For innovation, see Coyle JF, Green JM (2014).

offer to crowdfunding investors open.[117] This led to the standardisation of contract practices and investor protection mainly through social media. From a European perspective, reliance on social media and "the wisdom of the crowd" has been described as "similar to libertarian theory, which holds that markets are most effective without any regulatory intervention".[118]

US crowdfunding practices were summed up by Wroldsen in a 2017 article.[119] First, the rewards-based model of crowdfunding (à la Kickstarter) strongly influences crowdfunding investment practices. Crowdfunding investors may find more leverage and protection through the power of social media than through discrete contractual provisions. Second, crowdfunding intermediaries play an influential role in crowdfunding investment practices, particularly in the area of standardised investment contracts. Third, equity securities are more common than debt securities. Fourth, novel investment contracts such as the SAFE and the KISS are used in crowdfunding. The SAFE and the KISS were originally designed for the funding of early-stage start-ups. SAFE is the acrynom for "Simple Agreement for Future Equity" originally developed by Y Combinator. KISS means the "Keep It Simple Security" developed by 500 Startups.[120]

Angel funding practices as a model for contractual innovation in the US. The regulation of equity crowdfunding in the US leaves room for contractual innovation. In practice, contractual innovation often means the reception of angel and venture capital practices in the crowdfunding context.

Issuers tend to offer stock or convertible securities to prospective crowdfunding investors. In the US, most of the convertible securities were found to be SAFEs in a 2016 study (section 5.3).[121] SAFEs were used by two different types of issuers: tech startups that were potentially attractive to venture capital investors, and non-tech startups with business models that were less likely to attract venture capital.[122]

However, the SAFE may not be an appropriate instrument for crowdfunding investments. A SAFE will prove valuable to the holder if, and only if, the company that issues it raises a subsequent round of financing, is sold, or goes public. Start-ups that use crowdfunding customarily are start-ups that cannot raise ven-

117 Green JM, Coyle JF (2016) pp 170 – 171.
118 Zetzsche DA, Preiner C (2018) p 225.
119 Wroldsen JS (2017).
120 See Coyle JF, Green JM (2014) pp 168 – 171. Critically on the use of the SAFE in crowdfunding Green JM, Coyle JF (2016).
121 Green JM, Coyle JF (2016) pp 174 – 176.
122 *Ibid*.

ture capital and are unlikely to go public in the future.[123] (One may ask whether the use of SAFEs should be complemented by a new kind of secondary market (Chapter 8).)

Venture capital practices as a model for contractual innovation in Germany. In Germany, contractual practices are influenced by the fact that transferring shares of a limited-liability company (GmbH) requires the involvement of a notary, which is too expensive in the context of equity crowdfunding.[124] This has contributed to the adoption of venture capital contract practices in German equity crowdfunding.[125] Crowd investors have also been asked to pay higher prices if they receive more cash flow and exit rights. However, it has turned out that these rights have no meaningful economic impact, because crowd investors are passive investors whose control rights either are ineffective or not exercised.[126]

Future access to venture capital as a constraint on contractual protection. Crowdfunding contracts can hamper the start-up's access to venture capital funding in later funding rounds. Venture capital investors reject most investment proposals. The more complicated the proposed investment, the more likely it is to get rejected.

One of the core differerences between crowdfunding and venture capital contracts is that crowdfunding contracts customarily are standardised, whereas traditional venture capital terms are negotiated individually for each project. This can be the cause of potential conflicts between the two contractual frameworks.[127]

Where crowdfunding investors are protected by contractual clauses and company law rights that venture capital investors want for themselves, the start-up's investment proposal is less likely to be accepted.

In a 2019 study, Moedl found deal-breakers: "[W]e find empirical evidence that, e. g., an inflated capitalization table owing to crowd investors holding direct securities in a company, redemption and voting rights by the crowd, as well as the non-existence of a drag-along clause, lead venture capitalists and business angels to refrain from an investment in an otherwise attractive but such-funded

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123 *Ibid.*

124 § 15 GmbHG; Hornuf L, Schilling T, Schwienbacher A (2019).

125 Hornuf L, Schilling T, Schwienbacher A (2019): "This, however, is a specificity of the German market, so contract structure may not be generalized to other countries. However, it shows that in a regulatory environment that allows wide contractual freedom, contracts used turn out to be similar to venture capital deals that separate cash flow rights from control rights."

126 *Ibid.*

127 Moedl M (2019) p 28.

start-up firm."[128] In practice, this means that "contractual frictions play a decisive role in whether entrepreneurs can combine crowd-based means of funding with traditional forms of venture financing".[129]

Moedl illustrated how these deal-breakers work with the case of Smarchive, a German start-up. In the absence of venture capital funding, Smarchive raised €100,000 from 144 crowd investors in exchange for an aggregated six percent stake in equity. Three months later, Smarchive received a much larger offer from a venture capital fund. The offer was conditional on termination or remodeling of the crowd investment. This required the consent of each and every crowd investor under German law.[130]

From this, we can draw three conclusions for crowdfunding practice. First, the requirements of later-stage funding can make it difficult for the start-up and the founders to protect investors in early-stage funding rounds. Second, the terms of crowdfunding investment contracts cannot be the primary source of investor protection. Instead, crowdfunding investors may need to rely on laws, social media, the wisdom of crowds, and their collective voice.[131] Third, if crowdfunding investors are protected by contractual clauses, a special-purpose vehicle (SPV) and contracts on collective decision-making can – in countries where it is legal – be used to make it easier for the start-up to obtain shareholder consent in the event that it seeks more funding in later funding rounds.[132]

Quality signals in social media. In the absence of effective legal protection and a secondary market, contributors that seek to invest in high-quality projects rely on private quality signals.

According to a study, contributors tend to respond to signals about the quality of the project, regardless of their expectations for financial return. Social media plays an important role: "High quality projects attract backers who may promote the project to other potential backers, or external media, thus increasing the draw of the project. Crowdfunding is built around this social concept, which is incorporated into most funding sites … [and] protects the interests of investors––it seeks to prevent that the company is drastically undercapitalized …"[133] At the same time, fraud is rare.

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128 *Ibid.*, p 1. See also *ibid.*, p 4.
129 *Ibid.*, p 1.
130 *Ibid.*, p 3.
131 Wroldsen JS (2017).
132 Hornuf L, Klöhn L, Schilling T (2018) p 518; Gabison GA (2015) pp 365 – 366 footnote 28. For legal constraints in the US, see section 302(b) of the JOBS Act of 2012 and section 3 of the Investment Company Act of 1940.
133 Mollick E (2014) p 6.

In the US, Regulation Crowdfunding requires a crowdfunding intermediary to provide communication channels on its platform so that potential investors can communicate with each other and with representatives of the issuer.[134] In other words, Regulation Crowdfunding facilitates the function of social media as a monitoring and control mechanism.

Attainment of funding targets and the use of funds. The management of payments can keep crowdfunding offerings serious and prevent fraud. The platform customarily is involved in the execution of payments.[135] Risk is reduced in two ways. The first relates to the attainment of funding targets and the use of funds. The second relates to the holding of funds.

Funding targets are taken into account in platform design one way or another. The funding process is double-layered. After contributors have decided to finance a project and offered their contributions, the funds either will or will not be distributed to the project. Whether they will be distributed depends on the funding targets and the way funding targets are taken into account.

It is customary to choose between the flexible funding model and the all-or-nothing approach. Under the flexible funding model, the company receives the raised funds even when targets are not reached.[136] The all-or-nothing model requires a critical mass to believe in the project before it is funded. Platforms only divest the funds collected to the campaign creator if the target is reached.[137]

According to Hofmann, the all-or-nothing approach "only permits funding to be provided to companies when the aggregate amount raised meets the predetermined targets" and "is more common because it protects the interests of investors––it seeks to prevent that the company is drastically undercapitalized and thereby exposes the investors to a particularly high risk of default".[138]

In the US, Regulation Crowdfunding sets out how to deal with targets. An issuer must disclose the target, the deadline, and the all-or-nothing approach: "The target offering amount and the deadline to reach the target offering amount, including a statement that if the sum of the investment commitments does not equal or exceed the target offering amount at the offering deadline, no securities will be sold in the offering, investment commitments will be cancelled and committed funds will be returned ..." An issuer must also disclose what will happen when the target is exceeded: "Whether the issuer will accept investments in excess of the target offering amount and, if so, the maximum

134 Regulation Crowdfunding, §227.303(c).
135 Hofmann C (2018) p 226.
136 *Ibid*., p 226.
137 Gabison GA (2015) pp 363–365.
138 Hofmann C (2018) p 226.

amount that the issuer will accept and how oversubscriptions will be allocated, such as on a pro-rata, first come-first served, or other basis …"[139]

The holding of customer funds. The holding of customer funds is a regulated activity in financial services. Whether the platform operator may hold investor funds can depend on its authorisation or registration and its regulatory compliance obligations.

In the EU, the scope of the MiFID II authorisation requirement can depend on the holding of customer funds.[140] Moreover, the "[s]afekeeping and administration of financial instruments for the account of clients, including custodianship and related services such as cash/collateral management and excluding maintaining securities accounts at the top tier level" is regarded as an "ancillary service" under Section B of Annex I to MiFID II. The revised Payment Services Directive (PSD2) permits even non-banks to provide payment services,[141] but neither account information service providers (AISPs) nor payment initiation service providers (PISPs) are permitted to hold customers funds. They will, therefore, need to co-operate with investment firms or banks.[142]

In the US, a funding portal must not "hold, manage, possess, or otherwise handle investor funds or securities". For this reason, it must direct investors to transmit their funds directly to a qualified third party, which may be a registered broker-dealer or qualifying bank or credit union. In any case, where the platform is permitted to hold customer funds, the holding of client funds is a regulated activity to reduce investors' counterparty risk.[143]

In some jurisdictions, the platform or a third party can hold title to securities as a fiduciary of investors. Investors can even invest in securities issued by a holding company that in turn invests in the crowdfunding project (see below).[144]

Direct equity investments, an SPV or pooling. In principle, equity crowdfunding investments could be direct equity investments (in the shares of the issuer), investments in the shares of an intermediate vehicle (such as a holding company, a special-purpose vehicle, or a fund), or based on nominee structures (with the operator of the platform or a third party as a fiduciary).

US securities law restricts the pooling of retail investors' investments in crowdfunding. Section 302(a) of the JOBS Act provides for a crowdfunding exemption from registration requirements for "emerging companies" and allows

139 Regulation Crowdfunding, §227.201.
140 Point (a) of Article 3(1) of Directive 2014/65/EU (MiFID II).
141 Points (3) and (4) of Article 4 of Directive 2015/2366/EU (PSD2).
142 Recitals 31 and 35 of PSD2.
143 Hofmann C (2018) p 226.
144 *Ibid.*, pp 226–227.

emerging companies to raise up to a total of $1 million (with later adjustments for inflation) annually from individuals who do not meet the "accredited investor" threshold.[145] However, section 302(b) of the JOBS Act prohibits "investment companies" from operating under the Act, preventing companies that make investments for others from offering mutual fund-type products. The exclusion of "investment companies" makes it more difficult for retail investors to pool their crowdfunding investments and diversify their holdings.[146]

In Europe, investment contracts are usually concluded directly between investors and start-ups, but sometimes a special purpose vehicle (SPV) may function as an intermediary for matching investments with the start-up.[147] This can be illustrated with the cases of Symbid in the Netherlands and Companisto in Germany.

Symbid was described by Gabison as follows: "Symbid, a major equity-based crowdfunding platform, organizes the investors of a successful crowdfunding investment round into a single purpose vehicle … The investor syndicate will be heard as a group and stand behind one powerful vote representing the entire amount of the equity offered in the fundraising campaign; in other words, the whole investor syndicate gets one vote. This ensures that the investors' voices are heard, but it also keeps the business attractive to future rounds of financing, which is the key to investors' ultimate goal of liquidity."[148]

Companisto explained how the pooling of investments worked in 2019 in its FAQs: "Since most startups regularly need additional capital for their future growth, Companisto contracts are optimized for follow-up financing by venture capital companies. This is to the advantage of both the startup and the company. Only startups that continue to have the opportunity to raise venture capital can grow and be successful in the long term. This requires contractually regulated coordination processes. To ensure that these can be carried out smoothly, the Companists' investments are pooled, i.e. bundled. The startup or venture capital company thus has a central contact for follow-up financing rounds. Without this pooling, a startup would no longer be interesting for venture capital companies who do not want to deal with a large number of contacts."[149]

145 See, for example, Williamson JJ (2013) p 2074.
146 *Ibid.*, p 2075.
147 Hornuf L, Klöhn L, Schilling T (2018) pp 518–519. See Gabison GA (2015) pp 365–366 footnote 28 mentioning that Seedrs in the UK, Symbid in the Netherlands, and MyMicroInvest in Belgium offer such intermediary services.
148 Gabison GA (2015) pp 365–366 footnote 28.
149 Companisto website.

In Singapore, it is customary to use nominee accounts for the bundling of funds. In this case, a third party holds the legal title to the company's equity rights as a fiduciary on behalf of the investors who are the beneficial owners. The platform often has this function.[150]

7.5 Some Design Principles for the Regulation of Equity Crowdfunding Marketplaces

The crowdfunding market is regulated one way or another.[151] How should equity crowdfunding be regulated? When drafting design principles for the regulation of crowdfunding, we can take into account the characteristics of crowdfunding and crowdfunding practices (section 7.4).

On one hand, crowdfunding can bring benefits to start-ups. First, it can complement traditional forms of start-up funding. For example, a start-up may for some reason or another have no access to angel funding or venture capital.[152] Second, it might appeal to start-ups that need cash but not the customary ancillary services of venture capital investors.[153] Third, the operators of crowdfunding platforms can be start-ups or growth firms themselves. Competition between many platform operators can bring innovation and new business models to start-up funding.

On the other, there is a risk of adverse selection and the emergence of a market for lemons,[154] the potential rewards for investors can be limited,[155] and their risk exposure is increased by the lack of a secondary market.

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150 Hofmann C (2018) pp 226–227.

151 See, for example, Wroldsen JS (2013) pp 632–634; Gabison GA (2015) p 362.

152 See Ibrahim DM (2015) pp 591–592; Hofmann C (2018) p 229. For the case of Smarchive, see Moedl M (2019) p 3.

153 Ibrahim DM (2015) p 589.

154 There is a similar problem when lawyers take equity instead of cash for their services. Coyle JF, Green JM (2017) pp 1427–1428: "Just as Groucho Marx once observed that he would never want to belong to a club that would admit him as a member, one North Carolina lawyer pointed out that those clients who were willing to give their lawyers an equity stake were—as a general matter—not the ones in which the law firms wanted to invest."

155 Hofmann C (2018) p 229: "[I]t is questionable whether non-professional investors should take on disproportionately high risks in exchange for the prospect of rather modest returns." Ibrahim DM (2015) pp 591–592: "Title III is unlikely to replace traditional entrepreneurial finance or Title II. Startups have historically preferred to use Rule 506 to raise funds from accredited investors only, and there is unlikely to be a sea change toward seeking out unaccredited investors."

Adverse selection may be triggered by the high-risk nature of early-stage start-ups[156] and the tendency of high-quality start-ups to raise angel funding and venture capital. Start-ups that choose crowdfunding may be of lower quality.[157] If this is what investors believe, the crowdfunding market can become a market for lemons.

Crowdfunding projects cannot have the same upside for investors as projects that raise angel funding or venture capital. Crowdfunding that is based on donations or rewards is a form of consumption rather than investment. Equity crowdfunding is coupled with a higher risk than loan-based crowdfunding, but the higher risk does not mean higher returns.

Moreover, the risk exposure of investors is increased by the lack of a secondary market. The lack of a secondary market can hamper the growth of the primary crowdfunding market.[158]

In any case, rulemakers need design principles for the regulation of crowdfunding platforms and offerings. We can have a look at some potential design principles.

Focus on start-ups. Regulators should focus on the interests of start-ups, because crowdfunding cannot provide financial security to contributors.

When crowdfunding is not a form of contributors' consumption, it is a high-risk investment. Regulation can do little to change the high-risk nature of crowdfunding. Regulators should therefore focus on the growth of start-ups and make it easier for start-ups to take steps on the funding path.[159]

Retail investors should be protected against abuses and fraud. There should be a light disclosure regime to prevent fraud and facilitate rational decision-mak-

156 Gilson RJ (2003) p 1076; Gabison GA (2015) pp 369 – 370; Ibrahim DM (2015) p 573: "As Ronald Gilson was the first to explain, early-stage startups present extreme levels of uncertainty, information asymmetry, and agency costs."

157 See, for example, Catalini C, Fazio C, Murray F (2016) p 7 on adverse selection and moral hazard problems; Gabison GA (2015) pp 369 – 370 on fraud, incompetence, and lack of exit strategies.

158 Gabison GA (2015) pp 368 – 370.

159 Compare Hofmann C (2018) pp 230 – 231: "Regulators face various challenges. Companies show little willingness for disclosure and platforms are no natural guardians of investors' interests. Additionally, non-institutional investors have barely any ways to acquire all relevant information about the envisaged investment, to monitor the recipients of their funding or to mimic sophisticated investors. Based on these findings, the regulatory focus of crowdfunding must be, and actually is, on the investment risk to which retail investors are subjected. The regulatory dilemma consists in finding the right balance between supporting a new and positively viewed funding model and providing the right level of investor protection."

ing.[160] Overregulation with a seemingly high level of investor protection might both mislead investors into believing that crowdfunding is an investment that can provide financial security and hamper the growth of start-ups.

Use regulatory dualism. It is fundamental to address the scope of the general regulatory regime for securities exchanges and securities offerings. Should crowdfunding platforms and offerings fall within the scope of the general regulatory regime or be exempted?[161] It seems that they should be exempted. This is indeed the case in the US and the EU.

Crowdfunding would not be commercially viable without exemptions from the general regulatory regime, because start-ups would not be able to cope with the high cost of regulatory compliance. Crowdfunding would not exist without exemptions.

Moreover, even where start-ups could cope with the high cost of regulatory compliance, the intended effects of the regulatory regime would be counterproductive. The general regulatory regime is designed to increase trust. The admission of securities to trading on a regulated market signals the high quality of the securities and the issuer – or at least the absence of circumstances that customarily are associated with securities and issuers that are unsuitable for retail investors. If crowdfunding issuers and investments fall within the scope of the general regulatory regime and inherently low-quality equity investments are offered to retail investors, investors' trust is abused. The inevitable failure of many high-risk start-up projects might then compromise the perceived quality of higher-quality issuers and the regulatory regime in general. For this reason, the better alternative seems to be to exempt equity crowdfunding offerings from the scope of the general regulatory regime.

In the light of the potentially low quality of crowdfunding offerings and the high-risk nature of early-stage equity investments, crowdfunding platforms play an important role. Crowdfunding platforms should be used as a filter and screening mechanism to ensure that start-ups and projects fulfil minimum requirements, and to reduce the risk of abuse and fraud. For this reason, there should be a regulatory regime for crowdfunding platforms. Regulatory dualism (section 6.3.12) can help.

Increase the variety and quality of crowdfunding platforms. The regulation of crowdfunding should seek to increase the variety of crowdfunding platforms and

160 In the US, Regulation Crowdfunding, §227.201.

161 Compare Gabison GA (2015) p 362: "Faced with these new types of IPO, some countries choose one of three positions: ignore this phenomenon and retrofit the applicable existing regulations; reaffirm which regulations apply; or create new regulations to deal with crowdfunding."

improve their quality. There can be a trade-off between variety and quality. The regulatory regime should nevertheless try to achieve both through regulatory dualism.

To increase variety and quality, regulators need to foster innovation and competition. It should be possible even for new players to operate a crowdfunding platform. Where regulators prefer to use the general regulatory regime, apply the one-size-fits-all-principle, or aim for a level playing field for all exchange or platform operators, crowdfunding platforms may end up being operated by large established financial firms whose core competences include regulatory compliance.[162] There should be a lighter regulatory approach to enable the market to develop.

To reduce abuse, there should be an authorisation or registration requirement for the operators of investment crowdfunding platforms. Fraud risk can be reduced by regulating the holding of customer funds. In practice, fraud has been rare in crowdfunding.[163]

In the US, Title II and Title III of the JOBS Act are examples of regulatory dualism combined with a registration obligation. The crowdfunding website must be operated by a licensed securities broker or a registered funding portal. In other words, a website operator could satisfy its obligation to register as a broker under Section 15 of the Securities Exchange Act by qualifying as a "funding portal".[164] The value of Title III platforms is seen to lie in their contribution to market innovation: "Equity crowdfunding platforms can also play a key role in shaping the future of Title III markets beyond the SEC rules. Platform rules, self-regulation, technical features and cultural norms will also shape how attractive online platforms ultimately become to high-growth startups and everyday investors. By experimenting with new market design rules, data streams (e.g. integration with verifiable growth metrics) and milestone-based funding, Title III platforms could substantially improve the quality and type of startups they are able to attract."[165]

In the EU, the Regulation on European Crowdfunding Service Providers (ECSP) for Business exempts ECSPs from obligations under MiFID II. ECSPs cannot be authorised under MiFID II.[166]

162 See Kitch EW (2014) p 893; Burkett E (2011) p 92.

163 Mollick E (2014).

164 Kitch EW (2014) p 892: "The newly proposed regulation on funding portals requires that they become members of the Financial Industry Regulatory Authority, something that few operators of websites will find it feasible to do."

165 Catalini C, Fazio C, Murray F (2016) p 8.

166 See recitals 10 and 75 of Regulation (EU) 2020/1503 (ECSP Regulation).

Rely on laws of general application, private quality signals, reputational intermediaries, social media, and the wisdom of crowds. Retail investors should not be protected by high admission and prospectus requirements. Instead, retail investors should be protected by laws of general application, private quality signals, reputational intermediaries, social media, and the wisdom of crowds.

Crowdfunding platforms are two-sided platforms. To succeed in the long run, they should provide value to both sides.

High admission and prospectus requirements would not work for issuers. Start-ups are new, small, and high-risk projects. For such projects to be able to fulfil admission requirements, they should be rather low. Prospectus requirements would be too costly for start-ups.

High admission and prospectus requirements would not work for the operators of crowdfunding platforms, either. This is again related to the nature of crowdfunding websites as two-sided platforms. A crowdfunding platform cannot prevail in competition against other crowdfunding platforms unless it can attract a large number of projects and contributors. Relatively low admission and prospectus requirements are fundamental for the commercial viability of a crowdfunding platform.

Prospectus-like disclosures would not work for retail investors. Unsophisticated investors either will not read or will not understand prospectuses. Disclosures should therefore be easy to read and understand.[167] Disclosures should provide basic information about the investment and risks.[168]

To create more value to retail investors, the quality of crowdfunding projects and start-ups should be increased. The question is how. In securities markets, the customary mechanisms include mandatory disclosures and admission requirements (sections 3.4.7 and 5.5.3). In venture capital, investors require contractual protection (section 5.3). All three would be problematic in the context of crowdfunding.

It would not be feasible to apply the practices of venture capital investors to protect crowdfunding investors.[169] Such protection would not bring value to investors in most projects but would reduce the access of successful start-ups to later venture capital funding.[170]

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167 Wroldsen JS (2013) p 632.

168 See Regulation Crowdfunding, §227.201.

169 See nevertheless Wroldsen JS (2013) p 583 proposing substantive venture capitalist protections for crowdfunding investors.

170 Moedl M (2019) p 2 on “contractual compatibility” as “key to the question whether crowd-based financing is suitable for growth-oriented innovative ventures”.

If the customary disclosures and admission requirements do not work, and if the use of venture capital practices is not feasible in this context, other mechanisms should take their place. Ibrahim recommends “the wisdom of crowds” and “the use of reputational intermediaries”.[171] There can be many kinds of reputational intermediaries.

First, this function traditionally has been the domain of auditors (section 2.4.6). In the case of crowdfunding, auditing requirements would increase costs.[172] Apart from reducing the obvious risk of fraud[173] that even could be addressed in other ways by the platform, auditing requirements might provide false security to retail investors about the quality of the crowdfunding investment.

Second, crowdfunding platforms act as reputational intermediaries as an ancillary service.[174] Generally, stock exchanges act as reputational intermediaries through admission requirements. In the case of crowdfunding, even modest acceptance requirements could suffice to reduce abuse and be a functional equivalent to auditing requirements.

Third, crowdfunding platforms can use mentoring. Mentoring is used by some traditional exchanges (section 6.4.11) for the purpose of improving the quality of issuers and increasing the number of IPOs. In crowdfunding, a mentoring programme communicated to the crowd could improve the perceived quality of issuers through its signalling effect and address the lemons problem.[175] However, a mentoring programme for crowdfunding projects could increase costs and reduce the commercial viability of crowdfunding platforms. To address this problem, mentoring could be provided by a pool of selected members of the crowd.

Fourth, the crowd can be used as a reputational intermediary. The wisdom of crowds means in this case reaction to private quality signals and social media. Social media is the natural forum for the power of the crowd. Crowdfunders

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171 Ibrahim DM (2015) p 593.

172 See Burkett E (2011) p 91 on US crowdfunding before the JOBS Act of 2012: “Legal costs will rise proportionally to the number of states in which an issuer sells securities. Beyond legal fees, most states require audited financial statements, which can be extremely costly. For a small-time promoter, these requirements may prove onerous. After all, legal and accounting fees must be paid before any securities are sold.”

173 Williamson JJ (2013) p 2079 on how “[a]ny scam can masquerade as a start-up”.

174 Ibrahim DM (2015) p 603 on the AIM’s Nominated Advisers as a model: “I contend that Title III should be amended to change funding portals to make them work like Nomads. The overarching change needed in Title III is to make the funding portal’s primary relationship be with startups, not investors.”

175 *Ibid.*, pp 598–603 on AIM’s Nominated Advisers.

seem to respond to signals about the quality of the project regardless of their expectations for financial return.[176]

Use caps. The high-risk nature of equity crowdfunding and the lack of legal protection give reason to use caps. Since crowdfunding platforms are two-sided, caps can be applied on the side of projects, on the side of investors,[177] or both. They are designed to create a balance between different objectives. Various kinds of caps have been used in regulatory practice.

On the side of projects, caps can relate to funds raised from investors, the number of investors, or assets. Such caps can be qualified by the class of investors. For example, in the US, Title III companies with more than $25 million in assets and over 500 non-accredited equity investors (or 2,000 investors of any class) are required to go public. Going public means here compliance with Section 12(g) of the Securities Exchange Act of 1934 and submission to stringent reporting and disclosure obligations.

On the side of investors, caps can lay down maximum amounts to limit people's downside exposure,[178] or minimum amounts that an investor may invest to ensure that investors are wealthy enough to bear losses. Caps can relate to investments in a single project or crowdfunding projects in general.

Caps can also be qualified by space and time. Time-limited caps can facilitate staging and increase the number of funding rounds. For example, a company issuing securities in reliance on Regulation Crowdfunding in the US is permitted to raise a maximum aggregate amount of $1,070,000 (originally $1,000,000) in a 12-month period. Individual investors are limited in the amounts they are allowed to invest in all Regulation Crowdfunding offerings over the course of a 12-month period.

Some practices may work better than others.

First, a cap on assets on the side of issuers can hamper an issuer's growth and give an incentive to seek alternative ways of raising funding without such restrictions.[179]

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176 Mollick E (2014) pp 4 and 6.

177 See, for example, Hofmann C (2018) p 229 discussing benefits on different sides, that is, benefits for companies, platforms, or non-professional investors.

178 Wroldsen JS (2017): "Yes, start-ups fail frequently, so investor caps are present to limit people's downside exposure." Section 302(a) of the JOBS Act.

179 Catalini C, Fazio C, Murray F (2016) pp 7–8: "[S]tartups with high-growth potential face an additional, significant disincentive when raising capital on Title III platforms: the requirement to go public when $25 million in assets is reached. Public listing carries with it a number of significant additional disclosure and reporting requirements ... [T]he highest growth prospects have access to other sources of capital that do not impose these requirements. Why would startups assume these extra obligations and pressures unless they do not have an alternative?" For

Second, caps on the side of investors can influence the management of risk through diversification. High minimum investment limits can make it more difficult for a contributor to fund many projects. High maximum investments limits might not encourage investors to be diversitied. High minimum and low maximum investment limits nudge contributors to manage risk by investing in non-crowdfunding assets.

Third, maximum investment limits on the side of investors cannot be effective unless each crowdfunding offering is exclusively conducted through one platform. The platform is better placed to determine whether the limits are complied with. The issuer should be able to rely on the work of the platform.[180]

Fourth, caps on the side of investors can lead to adverse selection when investors are divided into different classes. For example, Title II of the JOBS Act removed the ban on general solicitation under Rule 506 provided that only accredited investors are solicited. Title II is regarded as a success.[181] Title III of the JOBS Act applies even to retail investors. It is not regarded as a success, because successful start-ups are expected to choose Title II offerings. To address this problem, a solution could be to replace the two categories with one category or make Title II available to a larger group of investors. This was recommended in an MIT policy report that went on to describe the benefits of the "substantially more flexible approach" of the Financial Conduct Authority (FCA) in the UK: "According to the regulator's most recent evaluation of the regime, the UK rules have been successful so far not only in letting the market grow and experiment, but also in protecting and educating retail investors."[182]

In any case, caps can be designed to strike a balance between various conflicting objectives. According to the MIT policy report, the balance struck by the

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AIFMD, see Building a Capital Markets Union. European Commission, Green Paper, COM(2015) 63 final, section 4.2, pp 16–18: "A particular concern that has been raised is that managers whose portfolio exceeds €500 million cannot apply to set up and operate such a fund, nor can they use these designations to market the funds in the EU. Widening the range of market participants could potentially increase the number of EuVECA and EuSEFs available."

180 This is the case in the US. See Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers (May 13, 2016) prepared by the staff of the SEC: "Each Regulation Crowdfunding offering must be exclusively conducted through one online platform. The intermediary operating the platform must be a broker-dealer or a funding portal that is registered with the SEC and FINRA. Issuers may rely on the efforts of the intermediary to determine that the aggregate amount of securities purchased by an investor does not cause the investor to exceed the investment limits, so long as the issuer does not have knowledge that the investor would exceed the investment limits as a result of purchasing securities in the issuer's offering."

181 Ibrahim DM (2015) pp 565 and 582; Catalini C, Fazio C, Murray F (2016) p 12.

182 Catalini C, Fazio C, Murray F (2016) p 12, referring to FCA (2015b) on UK regulatory practice.

Title III rules is “thoughtful as well as substantive”, but two fundamental questions remain. The first is whether the rules “encourage investors to be properly diversified” given the relatively small investment limits. The second is whether Title III platforms are likely to “attract the next generation of ‘unicorns’ ($1 billion startups) and offer real opportunities for everyday investors to share in their returns”.[183]

Permit pooling for retail investors. It should be made possible to pool investments even where contributors are retail investors.

Pooling is restricted in the US. While Title II the JOBS Act of 2012 facilitates the pooling of equity crowdfunding for accredited investors, Title III restricts pooling for non-accredited investors. However, there should be room for innovation and competition between alternative business models in crowdfunding.

Pooling is an alternative way to organise contributors’ investments. It can sometimes benefit both start-ups and contributors and make crowdfunding more attractive to both.

For example, pooling can be used to anticipate future funding rounds and help the start-up to negotiate with venture capital funds. Pooling can also help to manage contributors’ rights (with direct or indirect share ownership in the start-up) and how shareholders’ rights can be exercised (individually or collectively). Moreover, permitting pooling might help contributors to invest in a larger number of projects and diversify their investments.

This said, the administration of pooling will increase costs. Pooling might not have any major effect on contributors’ financial security. If contributors want to manage risk through diversification, there are easier ways than the pooling of inherently high-risk and low-quality crowdfunding investments. Retail investors can look for investment opportunities outside crowdfunding.[184]

Create new secondary markets and a new company form. Equity crowdfunding lacks a secondary market. The lack of a secondary market tends to hamper the primary market. One may ask whether secondary trading in equity crowdfunding investments should be liberalised. Past experiences indicate that the answer is no.

There was a failed seven-year experiment in the 1990s under Rule 504 of Regulation D. Burkett has described it as follows: “In 1992, the SEC amended Rule 504 of Reg D to drastically reduce the restrictions on small issuers, who could then make general solicitations and sell securities that could be freely

183 Catalini C, Fazio C, Murray F (2016) p 6.
184 See nevertheless Williamson JJ (2013) p 2079 on pooling as a way of diversification in the crowdfunding market.

traded on the open market. The SEC's rationale was that 'the size and local nature of these small offerings did not appear to warrant imposing extensive federal regulation.' However, seven years later, the SEC reversed course and re-adopted the pre-1992 restrictions. This reaction was prompted by a surge of 'pump and dump' schemes perpetuated by unscrupulous promoters. Given this example, the SEC may suffer from a 'once bitten, twice shy' attitude toward small-issuer concerns."[185]

Problems caused by the inherently low quality of equity crowdfunding investments and the fact that they are sold to unsophisticated retail investors cannot be cured by high listing requirements and disclosures.[186]

This said, there could be an alternative. Secondary markets could be created with the help of microexchanges (Chapter 8). The nature of equity investments as credence goods could partly be mitigated by requiring from the company a track record as a condition for the use of a microexchange.[187] The low quality of equity crowdfunding investments and the risk of a lemons market could partly be addressed by creating a new company form – the small public limited-liability company (Chapter 9) – for start-ups that fulfil certain minimum requirements and want to use the proposed microexchange.

The availability of a new company form (the small public limited-liability company) and a new trading mechanism (the microexchange) could increase the popularity of crowdfunding. They could make crowdfunding more attractive to higher-quality start-ups and their early investors that plan future funding rounds in four ways.

First, they could give some good crowdfunding start-ups a new goal and make them look more serious in the eyes of investors. As it stands, direct equity crowdfunding investments in start-ups do not provide long-term financial security for retail investors. But a start-up needs funding in any case. Some early investors might prefer retail investors to follow them into start-ups.[188] Where a

185 Burkett E (2011) p 96. See also Wroldsen JS (2013) pp 603–606.
186 Wroldsen JS (2013) pp 603–606: "Therefore, continuing to apply a purely disclosure-based philosophy to crowdfunding investment is flawed because it places excessive trust in the power of disclosure to protect crowdfunding investors." Gabison GA (2015) pp 368–370: "Fraud, incompetence, and lack of exit strategies jeopardize equity crowdfunding. Fraud constitutes the biggest threat to crowdfunding because traditional reputational and legal enforcement methods may not work."
187 Ibrahim DM (2013) p 253: "Most market investors are not interested in funding start-ups due to their lack of a track record, high failure rate, and lack of liquidity. However, two types of investors do specialize in these investments: angel investors and VCs."
188 Ibrahim DM (2015) p 592: "Even without these investment caps, I have argued that part of the Internet's attraction for accredited investors is the ability to add tag-along passive investors

start-up has survived the early years (thanks to crowdfunding,[189] angel investors, luck, or otherwise), liquidity and suitability for retail investors could be increased by making it possible for the start-up to re-incorporate as a small public limited-liability company that uses a microexchange to facilitate trading. Re-incorporation should be made easy. In the long term, the availability of a new trading mechanism might increase the number of companies with publicly-traded shares.[190]

Second, more likely future access to public trading could make it more meaningful to use new venture capital or crowdfunding instruments such as convertible securities (SAFEs or convertible notes).[191] Convertible securities have not been suitable for crowdfunders in the past.[192]

Third, the availability of secondary trading and access to public markets could help to reduce dependence on venture capital in later funding rounds.

Fourth, where venture capital is the preferred form of funding in later funding rounds, standardisation by means of a new company form could help to reduce the risk of contractual incompatibility, that is, the risk that the legal framework of the crowdfunding investment is not aligned with the requirements of venture capital investors in a future funding round.[193]

Cross-border transactions. Both access to funding and the level of investor protection can depend on whether cross-border transactions are permitted.

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at a low cost. In other words, accredited investors want unaccredited investors to follow them into startups."

189 Hofmann C (2018) p 228: "Taken to extremes, gullible retail investors in such companies may serve as 'guinea-pigs', testing the waters for recipients of funding and professional investors alike. This is the case because a company that survives the critical, initial phase of its existence can then rely on more traditional funding options from angel investors, venture capitalists, and banks."

190 Heminway JM (2017) p 211: "Both the lack of existence of a resale market and support for an unsustainable resale market may have adverse effects on the markets involved in equity crowdfunding."

191 Green JM, Coyle JF (2016) pp 174 – 176: "Of the 96 issuers to launch crowdfunding offerings through August 31, 2016, 30 issuers (approximately 31 %) chose to offer convertible securities (such as convertible notes, SAFEs, or similar instruments) to prospective crowdfunding investors. Ninety percent of the convertible securities used were SAFEs. The remaining convertible securities were convertible notes."

192 Green JM, Coyle JF (2016) pp 174 – 176.

193 Moedl M (2019) p 2: "As venture capital typically invests higher amounts than crowd campaigns could raise ... and also serves as a door opener for the important resources besides capital ..., contractual compatibility may ultimately be key to the question whether crowd-based financing is suitable for growth-oriented innovative ventures."

There should be constraints on cross-border equity crowdfunding. Such constraints can be a way to balance conflicting objectives.

On one hand, the liberalisation of cross-border transactions could increase equity crowdfunding. Especially in small markets, cross-border transactions could help to increase the number of investors or projects to invest in.

On the other, equity crowdfunding is akin to betting. In the absence of an efficient legal mechanism to increase the quality of these inherently low-quality and high-risk investments, local forms of control become more important. Investors may benefit from a favourable business culture, social norms, social media, and general civil and criminal law remedies in the start-up's country. Where projects and investors are located in different countries, such local forms of control will not work for investors and the risk of abuse is increased.

The protection of retail investors should prevail in the context of cross-border equity transactions. At the end of the day, start-ups that turn to crowdfunding may not need much money. The funds should be available in the domestic market. Local start-ups may even benefit from local monitoring by investors and the platform.

Constraints on cross-border transactions can take many forms. They can be direct or indirect. Direct constraints can include: applying registration or authorisation requirements to crowdfunding platforms; reserving the use of the platform to companies in the same country; limiting the activities of foreign crowdfunding platforms; and applying more stringent registration or disclosure requirements to foreign companies. Indirectly, cross-border transactions can be hampered by the existence of different regulatory regimes in different countries and the modalities of cross-border transactions.

Constraints on cross-border transactions can improve the efficiency of caps. Caps in a certain country restricting the subjective crowdfunding activity of a contributor may be less effective where the contributor even can invest in foreign securities. The efficiency of such caps can be increased by restricting cross-border transactions or by integrating national markets so that investment behaviour can be monitored regardless of where in the region the contributor is located.

There are differences between the US approach and the EU approach regarding cross-border transactions. In the US, the approach is restrictive. In the EU, the Regulation on European Crowdfunding Service Providers (ECSP) for Business is designed to facilitate the operation of cross-border crowdfunding platforms.

In the EU, crowdfunding markets outside the UK largely have been small and domestic.[194] The purpose of the ECSP Regulation is to contribute to an internal

194 European Commission (2017c).

market by providing a single set of rules and a single authorisation for cross-border crowdfunding platforms.[195]

There are direct constraints in the US. For example, the SEC has concluded that non-US issuers may present unique risks that would make them unsuitable for the scaled regulatory regime associated with crowdfunding. An issuer must therefore be organised under, and subject to the laws of a state or territory of the United States or the District of Columbia.

There are also indirect constraints on cross-border transactions in the US. In a 2011 article, Burkett described the effect of differences in US state laws on US crowdfunding as follows: "Even if an issuer qualifies for an exemption from federal registration requirements, it likely still must comply with state registration requirements in every state in which it intends to offer or sell securities. This creates problems in the context of investment crowdfunding because it means that an issuer would have to screen potential funders based on their residency. Furthermore, it creates a tension, if not a paradox, between the viability of the offering and the costs of even making the offering. After all, the offer will be more viable if available in more states, but more states mean higher costs. Small-time promoters may only be able to afford to register in a few states, which may jeopardize the viability of their offerings. Larger intermediaries might be able to bear some of these costs, but the million-dollar limit might make a broadly available offering infeasible given the fixed costs."[196] Moreover, Burkett mentioned legal costs: "Legal costs will rise proportionally to the number of states in which an issuer sells securities. Beyond legal fees, most states require audited financial statements, which can be extremely costly. For a small-time promoter, these requirements may prove onerous. After all, legal and accounting fees must be paid before any securities are sold."[197]

Payments and settlement. Equity crowdfunding investors make payments and expect to receive shares in return. Risk is reduced in two ways.

The first relates to funding targets. The "all-or-nothing" approach can be used to ensure that the project is not undercapitalised.[198]

The second relates to the holding of funds. If the two sides of the transaction do not happen simultaneously, parties are exposed to a counterparty risk. An intermediary can be used for the management of payments and settlement between the parties. In such a case, the funds should be protected against the insolvency of the intermediary.

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195 Recital 7 of Regulation (EU) 2020/1503 (ECSP Regulation).

196 Burkett E (2011) pp 89–90.

197 *Ibid*., p 91 on US crowdfunding.

198 Hofmann C (2018) pp 226–227.

7.6 Conclusions

Equity crowdfunding is facilitated by new regulation. However, equity crowdfunding creates problems for regulators. The default approach is to assume that investors should be protected. However, one may ask to what extent contributors should be protected as investors in the light of the fact that equity crowdfunding is not a reasonable form of investment but could be seen as a form of consumption. If contributors are protected by the regulatory regime that applies to the public offering of securities in general, retail investors may be misled about the high-risk nature of equity crowdfunding.

The volume of crowdfunding is low, but there are many crowdfunding platforms. In the future, there could be consolidation. The drivers of consolidation may include the need to create positive network effects, the cost of regulatory compliance, and the interests of large financial intermediaries. Large financial intermediaries might take over operators of crowdfunding platforms.[199]

This said, there could be reasons for large financial intermediaries to avoid equity crowdfunding. First, there is the question of volume. Low volumes are an obvious reason to stay out of the business. Second, cross-selling opportunities might be hampered by the nature of equity crowdfunding. Start-ups that raise crowdfunding are high-risk investment targets, and equity crowdfunding could be seen as a form of consumption rather than investment. Third, there is a question of regulatory compliance. Large financial intermediaries must comply with fiduciary requirements in the provision of customer advice and the marketing and selling of financial products and services.[200] It might be difficult for large financial intermediaries to ensure compliance with the customary fiduciary requirements in relation to the same customers when selling both traditional investment products (that can provide financial security) and equity crowdfunding products (that cannot provide financial security). Financial intermediaries may not want to compromise regulatory compliance. Fourth, large financial interme-

199 Deutsche Börse AG, Celent (2016) pp 15 – 16: "[C]rowdfunding has emerged as a viable form of alternative financing for many startups and individual investors. Nonetheless, as the space becomes increasingly institutional, it is increasingly capturing the eye of regulators in the US and Europe. A merger of alternative funding platforms with firms with strong regulatory relations looks to be the future … There is nothing precluding large market infrastructure providers from leveraging their market operation expertise in financial and large corporate domains, in order to act as the point of encounter between idle capital in hands of private investors and cash-rich corporations, and the need for growth capital from small businesses across the world. This is a trend for financial market infrastructure organizations to capitalize on for many years, providing new solutions to the market in the realm of funding and financing."
200 See, for example, Articles 24 and 25 of Directive 2014/65/EU (MiFID II).

diaries might prefer not to compromise their reputation in the investment business.

While there is much hype around equity crowdfunding, crowdfunding is not the proper means to increase the number of companies with publicly-traded shares and retail investors' direct equity investments.

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8 Microexchanges

8.1 General Remarks

We propose the development of "microexchanges" as one of the ways to increase the number of companies with publicly-traded shares and retail investors' direct share ownership (section 6.4.13). On one hand, the notion of microexchange is a rather extreme thought experiment to study what could happen when the reduced cost of technology acts as the driver of the fragmentation of the market for the service product stock exchange. On the other, it might be necessary to study microexchanges as a potential future trading mechanism. It is necessary to develop new trading mechanisms for many reasons.

First, there are too few companies with publicly-traded shares in the world. The stock exchange has been regarded as the traditional mechanism to allocate equity investments. In principle, stock exchanges let anybody participate in the accumulation of wealth. The relatively small number of companies with publicly-traded shares is likely to reduce allocative efficiency[1] and increase financial intermediation's tax on capital.[2] The lack of listed companies causes problems to retail investors and pension funds.[3]

For retail investors, the lack of companies with publicly-traded shares means that they will end up relatively poorer. The fact that almost all companies in the world are outside public markets limits retail investors' choice, increases their exposure to bubbles when they invest in scarce publicly-traded stocks, forces them to use the services of financial intermediaries and invest indirectly, increases their costs, and increases financial inequalities. Since the 1970s, the growth and concentration of financial intermediation have belonged to the striking features of financial markets.

For pension funds, the combination of low interest rates and the lack of listed companies means low returns on investments at the same time as people are

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1 See, for example, MacIntosh JG (2013) p 12: "Allocative efficiency in the real economy (AER) is achieved when the money of net savers of capital is funnelled to net users of capital offering the 'best' uses of capital … The primary market supplies the most obvious case."

2 Brandeis LD (1914) p 110: "[T]he banker controls the only avenue through which the investor in bond and stocks can ordinarily be reached. The banker has become the universal tax gatherer." Lewis M (2015) p 109: "Financial intermediation is a tax on capital; it's the toll paid by both the people who have it and and the people who put it to productive use. Reduce the tax and the rest of the economy benefits."

3 See, for example, Merryn Somerset Webb, Private equity is a club and the ordinary investor is not invited. Financial Times, 28 August 2020.

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living longer and populations are aging. This has driven pension funds to commercial property and alternative investments.[4] Low returns on investments mean that beneficiaries – retail investors or most people – can expect lower pensions. Interest rates may not rise enough in the future in the light of the fact that real interest rates have been falling over a period of many centuries.[5]

A November 2019 report from the Group of Thirty (G30) estimates that the world's top economies will face a shortfall of $15.8 trillion in 2050 in providing financial security for their citizens in retirement. A €2 trillion annual pension savings gap has been estimated for Europe.[6] According to the G30 report, pension savings "tend to be allocated to lower-risk, liquid assets such as large-cap equity stocks, bluechip corporate and government bonds, and cash". Unfortunately, such "low-risk liquid investments reduce or even eliminate expected returns", and lower yields "widen the gap between what people are able to save while working and the wealth and incomes they need in retirement". According to the G30 report, savers and pension funds should take more risk, and the taking of more risk should be mitigated through appropriate diversification across asset classes: "Carefully regulated and overseen, illiquid assets can provide many benefits and may be appropriate for inclusion in significantly large pools of capital with long time horizons."[7]

Second, we need a new trading mechanism to rescue public markets. Public markets are in the process of being replaced by private markets.[8] Stock exchanges will become obsolete, if stock exchanges are replaced by capital funds,[9] trade

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4 See, for example, Josephine Cumbo and Robin Wigglesworth, 'Their house is on fire': the pension crisis sweeping the world. Financial Times, 17 November 2019; Chris Flood, Coronavirus threatens Europe's pension industry. Financial Times, 28 September 2020; The Economist, Like a ton of bricks, 27 June 2020 on commercial property: "The infatuation with commercial property began in earnest after the global financial crisis of 2007–09. Interest rates were cut to almost zero across much of the rich world, making it harder to generate the safe cash flows that pension funds and insurers need to meet future liabilities." For the long-term implications of low risk-free interest rates, see Kopecky J, Taylor AM (2020); Robin Harding, The mysterious death of the market rentier. Financial Times, 21 July 2020.

5 Schmelzing P (2020).

6 Group of Thirty (2019) pp xvi—xvii.

7 *Ibid.*, pp 56–58.

8 Clayton J (2019): "Twenty-five years ago, the public markets dominated the private markets in virtually every measure. Today, in many measures, the private markets outpace the public markets, including in aggregate size."

9 Sobel R (1977) pp 220–221: "[T]he major economic function of Wall Street today is the channeling of funds from investors to new and old companies, and it is here that the undewriters become vital … The underwriter raises money for the company whose securities he is selling, while the trustee invests money for those who seek income and capital gains … If and when

internalisation,[10] dark trading, and dealer markets.[11] Obviously, private markets are neither liquid nor transparent and therefore lack the characteristics regarded as the key to well-functioning capital markets. In the EU, SMEs receive more than 75 % of their external funding from bank loans.[12]

Third, we need new institutions and more companies with publicly-traded shares to increase market efficiency.

Stock markets are hardly "efficient" when very few companies have publicly-traded shares and the stocks of almost all companies in the world are outside public markets. To be "efficient", stock markets should cover the shares of many more companies and be much bigger in size. Neither the concentration nor the fragmentation of trading venues have helped to increase the number of companies with publicly-traded shares so far.

It is customarily assumed that the "efficiency" of securities markets has three dimensions, namely institutional efficiency, operational efficiency, and allocational efficiency.[13] Existing stock exchanges largely fail to facilitate the allocation of financial capital to companies but succeed in facilitating the allocation of capital between investors and the distribution of company funds to shareholders. From the perspective of issuer-firms, the level of allocational efficiency is rather low.

New regulation is necessary to cure the inefficiency of stock markets. If existing market organisation does not work, it should be complemented by new institutions.[14] New institutions should be introduced to provide services that existing stock exchanges fail to provide or provide badly.

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the two gigantic forces do come together – when entire underwritings are taken by trustees – the stock exchanges will become obsolete."

10 See, for example, recital 19 of Regulation (EU) 2017/565.

11 FESE (2019) p 5 on dark trading: "In the absence of policy action, price formation on public markets may become non-viable in the long-term, leading to the re-emergence of dealer markets with higher risk to systemic stability, higher cost and less transparency."

12 Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, Chapter 1.

13 See, for example, Veil R (2017) § 2 paragraphs 4 – 6.

14 Merton RC, Bodie Z (2005) p 1: "When particular transaction costs or behavioral patterns produce large departures from the predictions of the ideal frictionless neoclassical equilibrium for a given institutional structure, new institutions tend to develop that partially offset the resulting inefficiencies. In the longer run, after institutional structures have had time to fully develop, the predictions of the neoclassical model will be approximately valid for asset prices and resource allocations." See also *ibid.*, pp 1 – 2 on a "functional approach to the design of a financial system in which financial functions are the 'anchors' or 'givens' of such systems".

Fourth, we need more companies with publicly-traded shares to increase resilience in the financial system.

The lack of companies with publicly-traded shares increases dependence on the available stocks. At the same time, it increases both the market valuation of the scarce stocks and the concentration of investments in large-cap stocks. The scarcity of liquid investment alternatives is a driver of investments in complex and opaque financial instruments.[15] For example, the IPOs of SPACs ballooned in 2020. The concentration of stock markets, the concentration of fund management, and increased investment in illiquid assets are likely to hamper the resilience of the financial system. The situation is made even worse by low interest rates. In September 2020, the President of Dallas Fed summed up the situation as follows: "Keeping rates at zero can adversely impact savers, encourage excessive risk taking and create distortions in financial markets."[16]

To increase resilience, it is not enough to regulate traditional trading venues in markets with too little supply of stocks as happened in the EU after the 2007–2009 financial crisis.[17] It would be necessary to increase the supply of stocks by increasing the number of companies with publicly-traded shares.

Fifth, we need a new kind of marketplace to foster the interests of issuer-firms. Whether firms choose to have publicly-traded shares in the first place may depend on the nature of the available marketplaces and whether their mechanisms are aligned with the interests of issuer-firms.

The existing organisation of stock exchanges is not driven by the interests of issuer-firms.[18] Current regulation tends to reflect the interests of financial inter-

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15 See, for example, Ferrarini G, Saguato P (2014) pp 2–3 on how the 2007–2009 financial crisis "exposed policy makers to the complexity and opacity of some financial instruments and activities".

16 Kaplan RS (2020).

17 See Moloney N (2014) V.1.2.4, p 433: "The G20 commitment to closing regulatory gaps and to increasing transparency can be associated with the EU's concern (under the 2014 MiFID II/MiFIR) to bring all organized trading venues within the regulatory net and to extend transparency requirements from equity trading venues to trading venues for bonds and derivatives. Venue regulation in the EU and internationally is also increasingly being directed towards stability and resilience; this can be seen in particular through the new generation of algorithmic trading controls, positions management requirements, and liquidity/market-maker requirements."

18 See, for example, Gadinis S, Jackson HE (2007) p 1258: "The traditional model of self-regulation found its justification in the alignment of interests between the investing public and member firms. In the post-demutualization world, self-regulators must establish that they share the interests of their shareholders and their corporate managers. The potential for conflict between the exchange's business goals and regulatory mission is apparent." The interests of issuers are nowhere to be seen.

mediaries. For example, financial intermediaries may prefer a particular kind of market liquidity.

The same bias can to some extent be found in company law. At least part of the existing regulation of companies with publicly-traded shares in the US and the EU is not designed with the interests of issuers in mind. Regulation can either foster the interests of institutional investors, increase distributions to shareholders, and hamper the managerial business model in which returns are generated through productive activities,[19] or foster the long-term interests of firms.

Whether issuer-firms choose to have publicly-traded shares can even depend on the quality of market investors and potential shareholders. From the perspective of the issuer-firm, one of the core functions of stock exchanges is to facilitate the provision of shareholders' services to the firm. Shareholders can be a source of funding and/or ancillary services. The rules of the marketplace can influence the nature of investors that use it and become shareholders. It is customary for issuer-firms that go private through friendly transactions to cite the benefits of private share ownership.

Moreover, the current regulatory framework is designed for large firms with liquid shares rather than for small firms with inherently illiquid shares. This probably has reduced the numbers of new stock exchange listings and listed firms.[20]

If stock exchanges are not regulated in the interests of issuer-firms, issuer-firms may have incentives to opt out of public markets. At the same time, stock markets fail to serve the interests of the public that need an avenue for "lucrative investments and simple risk diversification".[21]

Sixth, we need a simple trading platform. Successful growth firms do not need a stock exchange to raise funding.[22] They may go public to make it easier for insiders or early-stage investors to cash out, or – particularly in the US – to ensure regulatory compliance due to their size or trading in their securities.[23] Title III companies with more than $25 million in assets and over 500 non-accredited equity investors (or 2,000 investors of any class) are required to go public.

19 François P, Lemercier C, Reverdy T (2015); Appelbaum E, Batt R (2014) pp 27–29; Lafer G (2017) pp 18–19.

20 See, for example, Weild D, Kim E, Newport L (2013) p 22.

21 Fleckner AM (2006) p 2592 on the public as a constituency of stock exchanges.

22 In China, the NEEQ is a junior stock exchange for the raising of funding. Xu W, Zhu S, Wu Z (2020).

23 de Fontenay E (2017) p 461.

Some firms have used reverse mergers or SPACs to create a secondary market for private investors' shares (section 6.4.2). A simple trading platform combined with low compliance costs might encourage more growth firms to go public and to go public earlier.[24]

A simple trading platform might be sufficient to fulfil the trading needs of long-term retail investors that want to invest in SMEs. The SEC has summed up the interests of retail investors as follows:

"The secondary securities markets exist to facilitate the transactions of investors. Investors should have confidence that their brokers will deal with them fairly and that their orders will be routed to market centers where they will be executed efficiently and at prices that are set by vigorous competition. In fulfilling their intermediary role, organized markets reduce the costs that every investor would otherwise incur to find contra-parties to their securities transactions and to negotiate a price. Fair and efficient securities markets thereby benefit investors by reducing their transaction costs, as well as the economy in general by establishing prices for the allocation of capital among competing uses. Accordingly, one of the principal Exchange Act objectives for the national market system is to assure the 'economically efficient execution of securities transactions.'"[25]

A simple trading platform could be enough to facilitate price discovery and transactions and to reduce transaction costs when trading in inherently illiquid SME shares.

Seventh, we need a new business model for organised trading especially for the shares of SMEs. According to an OECD study, "[p]ure for-profit models for growth platforms can have perverse incentives and cannot ensure sustained capacity to bring SMEs to the market and, equally importantly, support them in the aftermarket".[26] The regulation of organised trading should leave room for alternatives to emerge for trading in SME shares.[27]

24 See even recital 132 of Directive 2014/65/EU (MiFID II): "It is desirable to facilitate access to capital for smaller and medium-sized enterprises (SMEs) and to facilitate the further development of specialist markets that aim to cater for the needs of smaller and medium-sized issuers."

25 SEC Release No. 34 – 42450 (February 23, 2000) (Self-Regulatory Organizations; Notice of Filing of Proposed Rule Change by the New York Stock Exchange, Inc. to Rescind Exchange Rule 390; Commission Request for Comment on Issues Relating to Market Fragmentation).

26 OECD (2015c) p 134.

27 See even recital 133 of Directive 2014/65/EU (MiFID II) on how the regulation of SME growth markets needs to provide sufficient flexibility.

Eighth, we should let issuer-firms take "make-or-buy" decisions when organising trading. For the issuer-firm, the way to organise trading in shares really should be a question of "make or buy".

A firm can be organised in different ways depending on the costs and benefits of doing something internally or buying it from the market.[28] The functions necessary to organise trading in shares should be no exception.[29] However, existing regulation to a large extent forces an issuer to outsource the operation of a marketplace to financial intermediaries and excludes the operation of the issuer's own marketplace. Existing regulation forces the firm to choose the "buy" alternative.

In principle, costs might be reduced if the regulatory regime made it possible to replace third-party stock exchanges as the firm's outsource providers. With the right legal framework, a large number of firms might prefer to produce internally the services that a small number of firms now buy from stock exchanges. We call such an internal trading platform the "microexchange". After the commoditisation and fragmentation of trading in recent years,[30] it should thus be made possible to replace the outsourcing of functions to stock exchanges by vertical integration at the level of issuer-firms and possibly concentration at the level of technology providers (see below).

Ninth, we should benefit from technological advancement when we can. Technological advancement has influenced markets in the past.[31] Digitalisation generally has reduced transaction costs. It has played a major role in the development of securities exchanges. In the future, it may be possible to reduce trans-

28 Coase RH (1937); Macey JR, O'Hara M (2005) p 566.

29 Macey JR, Kanda H (1990) pp 1009 – 1010 on functions: "We show that the product offered by organized securities exchanges, which is called a 'listing,' can be unbundled into four component parts. Specifically, organized exchanges provide listing companies with: (1) liquidity, (2) monitoring of exchange trading, (3) standard form, off-the-rack rules to reduce transactions costs, and (4) a signalling function that serves to inform investors that the issuing companies' stock is of high quality."

30 See even Macey JR, O'Hara M (2005) p 565: "A particular thesis we develop is that shifts in transaction costs and agency costs have dictated changes in the optimal economic organization of trading. These changes have forced economic activity to migrate from a centralized market to multiple competing venues."

31 Merton RC, Bodie Z (2005) p 2: "New financial product and market designs, improved computer and telecommunications technology, and advances in the theory of finance over the last generation have led to dramatic and rapid changes in the structure of global financial markets and institutions."

action costs and agency costs by vertical integration complemented by fintech, the platform business model, and cloud services.[32]

Fintech can help to change markets in the future. Fintech could provide the online platforms and cloud services that issuer-firms need for the purpose of organising trading, and the superapp functions that enable retail investors to see the stocks of many companies simultaneously and create the user experience of a larger market.[33] If commercially and ecologically viable, blockchain technology may facilitate new forms of record-keeping, clearing and settlement[34] as well as non-intermediated shareholder voting and engagement.[35] Existing settlement systems may be disrupted by tokenisation and central bank digital currencies.[36]

Tenth, we should create a better path from early-stage primary markets to traditional public secondary markets.

The availability of an early-stage secondary market for stocks might improve early-stage primary markets. The prospect of secondary trading might make it easier to issue new shares to early-stage investors and increase the business of alternative primary markets such as equity crowdfunding. It might thus increase the pool of companies that consider a traditional listing at a later stage.[37]

At the same time, the availability of the microexchange as such an early-stage secondary market might help to find alternatives to venture capital. It would be important to find an alternative, because the reliance of high-quality start-ups on venture capital has reduced the number of companies with publicly-traded shares.[38]

About this Chapter. It is possible to design a meaningful regulatory regime to increase the number of companies with publicly-traded shares provided that one

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32 van Steenis H (2019); Patrick Jenkins, Big banks look to the cloud to accelerate digital shift. Financial Times, 20 July 2020.

33 Deutsche Börse AG, Celent (2016): “Without a doubt, the financial industry will change its technology model, and will foster the integration of services, as long as the customer protection is maintained.”

34 See Avgouleas E, Kiayias A (2019).

35 See Van der Elst, Lafarre A (2019).

36 ECB (2020); BIS Annual Economic Report 2021. Critically Hofmann C (2020).

37 Ibrahim DM (2019) pp 1154–1155 on how London’s AIM “has not vaulted companies to the LSE; but it has, in fact, pulled LSE-listed companies to it.”

38 The Economist, NOIPO? 16 May 2019: “Startups have been staying private as long as possible and granting shares conferring greater voting rights to their founders when they do finally go public. In turn big private investors, including sovereign-wealth and hedge funds, have pumped billions into ‘unicorns’ … capturing most of the value they create and leaving little for investors in public markets.”.

can develop the design principles that could be applied in the process.[39] In this Chapter, we propose design principles for microexchanges (section 6.4.13).

We will start with the core functions of a stock exchange from the perspective of the firm (section 8.2) and the nature of the regulation of microexchanges (section 8.3). For example, no new kinds of marketplaces will emerge on a large scale without extensive regulation designed to reduce transaction costs.[40]

We will study fundamental choices relating to the owner of the marketplace, the operator of the marketplace, the central counterparty (section 8.4), and eligibility criteria (section 8.5).

We will also study alternative market structures. The new regime must lay down a market structure, that is, procedures for matching buyers to sellers. There are several alternative market structures for equity markets. One can distinguish between order-driven markets, quote-driven markets, brokered markets, and hybrid markets (section 8.6).

We will need to study liquidity (section 8.7). Existing exchanges have competed on "liquidity".[41] Ensuring sufficient liquidity is particularly challenging for small issuers and small marketplaces. Liquidity is here defined as the ability to transform a non-cash asset into its cash equivalent without loss of capital. In practice, exit is relatively easy in liquid markets and more difficult in illiquid markets. The level of liquidity depends partly on market design (in particular on the method for the matching of bids), partly on the characteristics of the shares (classes of shares, transferability), market capitalisation (large cap or small cap), and the share ownership structure (concentrated or dispersed, free float). For the issuer, however, "liquidity" is not an end itself. The regulation of microexchanges should therefore address "liquidity" in a new way that is more suitable for small issuers.

The operation of a trading platform is not cost-free. Costs must be allocated one way or another (section 8.8).

Regardless of the fact that microexchanges can be seen as a form of vertical integration, outsourcing must be a very important component of organising microexchanges. Obviously, the issuer-firm needs to prioritise its core business. The

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39 Compare Macey JR, Kanda H (1990) p 1008: "A central premise of this Article is that market 'reform' in the form of new regulation is doomed to failure until the economic functions of organized exchanges are better understood."

40 Coase RH (1988) p 9 on how commodity exchanges and stock exchanges are markets in which transactions are and must be highly regulated to reduce transaction costs and to increase the volume of trade.

41 See, for example, Mendiola A, O'Hara M (2003) on how competition focused on "who can provide liquidity more efficiently" at the turn of the millenium.

operation of a marketplace for its own shares probably does not belong to its core business. If microexchanges became legally possible, to what extent should the issuer-firm be able to outsource operations?[42] It may need to outsource many functions to financial service providers. The platform business model of fintech must play a major role (section 8.9).

The development of microexchanges would not be possible without regulatory dualism and exemptions from the current regulatory regime for financial markets (section 8.10).

Microexchanges need mandatory provisions of law. If each company has its own marketplace for its own shares, self-regulation by the marketplace must be replaced by laws and the enforcement of rules must be allocated to public authorities (section 8.11).[43]

The new market design should be complemented by new corporate governance rules and a new company law regime for small public limited-liability companies (Chapter 9). While mere trading could be regarded as "a commodity [and] a standard process",[44] the legal framework that goes with it is not a commodity. Differences in the legal frameworks that facilitate trading and lay down corporate governance rules mean that the choice of a trading platform is more than a choice between commodity products that share the same specifications. Corporate governance rules for companies with publicly-traded shares are increasingly based on government regulation.[45]

42 Coase RH (1937) p 386; Coase RH (1960) p 16: "It is clear that an alternative form of economic organisation which could achieve the same result at less cost than would be incurred by using the market would enable the value of production to be raised. As I explained many years ago, the firm represents such an alternative to organising production through market transactions."
43 Compare Gadinis S, Jackson HE (2007) pp 1243–1244: "Ultimately, who should be responsible for regulating securities markets? What role should central governments play? What powers should administrative agencies have, and what issues are better left to the stock exchanges themselves?"
44 Macey JR, O'Hara M (2005) p 564.
45 *Ibid.*, p 578 on the US: "As a purely descriptive matter, the available evidence is inconsistent with the assertion that rival trading venues compete to produce corporate law rules. Rather, the accurate depiction of the competitive situation is that the SEC coordinates the regulatory standards of the exchanges and the Nasdaq in order to prevent competition among these trading venues from occurring at all."

8.2 The Nature and Core Functions of a Stock Exchange for the Firm

Traditional stock exchanges are intermediaries[46] with many characteristic functions. Generally, stock exchange services in the financial instruments value chain can relate to listing, trading, clearing, management of counterparty risk, enforcement of collateral requirements (margins), settlement, custody services, and collateral management.[47] One can say that a stock exchange brings together parties that want to participate in trading, provides a platform for trading, provides clearing and settlement services, reduces the cost of funding in the primary market by increasing liquidity and bringing down the costs of trading in the secondary market,[48] and provides signalling and reputational services.[49] Services in the value chain can be bundled or unbundled.[50]

Whether a stock exchange can prevail in competition against other stock exchanges depends on many things. The competitiveness of a stock exchange can depend on a combination of factors relating to: (a) its business model (with increasing diversification reducing the volatility of its revenues); (b) its governance arrangements; and (c) the liquidity it provides.[51]

46 Fleckner AM (2006) p 2545.

47 See paragraphs 32–40 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange).

48 Generally, see Coase RH (1960) p 15; Coase RH (1988) p 9; Mues H (1999) p 28.

49 Mues J (1999) pp 29–30. Compare Macey JR, Kanda H (1990) pp 1009–1010: "We show that the product offered by organized securities exchanges, which is called a 'listing,' can be unbundled into four component parts. Specifically, organized exchanges provide listing companies with: (1) liquidity, (2) monitoring of exchange trading, (3) standard form, off-the-rack rules to reduce transactions costs, and (4) a signalling function that serves to inform investors that the issuing companies' stock is of high quality." For signalling services, see Macey JR, Kanda H (1990) pp 1023–1024: "Listing on an exchange can provide a valuable filter to investors, informing them that the securities listed are of high quality. This signalling service is valuable to issuers as well as investors. Issuers find it costly to make credible assurances to potential investors that their securities are of high quality. An exchange listing provides an independent verification of quality … Consistent with this analysis, exchanges require that listed firms meet certain listing standards."

50 For example, the Code of Conduct for clearing and settlement that was signed by the industry associations for stock exchanges, central counterparties and central securities depositories in Europe on 7 November 2006 favoured the unbundling of services. See even paragraphs 41–43 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange).

51 Floreani J, Polato M (2010) p 32.

We can have a look at what this means for issuers and markets and whether there is room for improvement. The relatively small number of companies with publicly-traded shares seems to have a connection to all three factors.

Stock exchanges as two-sided platforms. As intermediaries, stock exchanges could be described as two-sided platforms with companies (or issuer-firms) on the supply side and investors on the demand side.[52] Platforms can benefit from network effects.[53]

Since the number of listed companies that use the services of these intermediaries is rather small (section 5.2), there is an imbalance between companies (the supply side) and investors (the demand side) in public markets.

To use the supply side more efficiently, regulators should make better use of the listed companies that are available. Retail investors' direct cross-border equity investments are currently hampered by securities laws. Countries should limit the extraterritorial scope of their securities laws, use the mutual recognition of regulatory regimes, use equivalence tests (section 6.4.6), and liberalise retail investors' direct cross-border equity investments (section 6.4.7).

To increase the supply side, regulators should improve the service product on the supply side by focusing more on the interests of firms, founders, and controlling shareholders (sections 6.3.6, 6.3.8 and 6.3.9). Improving the service product on the side of investors (the demand side) alone would not help to increase the supply side, because there is no shortage of potential investors.

Trade-off between transaction costs and agency costs. Transaction costs obviously play an important role for market participants.[54] They play an important role even for issuers. Optimal allocation is said to involve a trade-off between transaction costs and agency costs.[55] Both have changed for issuers that use stock exchanges.

Demutualisation and the incorporation of exchange operators as for-profit companies created or changed principal-agent relationships and generally led

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52 For a different view on the "sell-side" and the "buy-side" in financial markets, see paragraph 66 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995– Deutsche Börse / London Stock Exchange).

53 See *ibid.*, paragraph 56.

54 Macey JR, O'Hara M (2005) p 568: "These transaction costs included the information costs of learning about firms (or potential investments), the costs of monitoring trading, the physical costs of the trading platform, the costs of clearing and settlement, and the basic contracting costs of trading between buyers and sellers."

55 *Ibid.*, p 567: "Coase's thesis was that the optimal allocation involved a tradeoff between the transaction costs and agency costs associated with the activity."

to “massive agency-cost problems”.[56] Issuers’ agency costs associated with the outsourcing of the operation of marketplaces for issuers’ shares increased as well.[57] Issuers’ agency costs were increased by the stock exchange business model (the increasing diversification of stock exchanges’ business) and governance model (with exchange operators as for-profit corporations). The interests of for-profit exchange operators and the interests of traders simply were less aligned with the interests of issuers.

Moreover, issuers’ costs have increased due to high listing costs and the high cost of regulatory compliance. From the perspective of the issuer-firm, the existing regulation of stock exchanges has increased the cost of the services of a stock exchange and the cost of the services of external shareholders (that is, the core and ancillary services of market investors).

At the same time, digitalisation and the threat of competition between marketplaces have reduced transaction costs. Transaction costs can further be reduced by mandatory provisions of law that increase standardisation[58] and make it possible to use of the same technology for trading in more securities.[59] Where information costs, computing costs, and transaction costs are lower due to digitalisation and technological advancement, the economies of scale brought by centralised trading on stock exchanges are reduced. With the help of fintech and the mechanisms of platform economy (section 6.4.16), this is likely to contribute to the decentralisation of marketplaces[60] and the fragmentation of trading (section 3.2.6).

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56 See *ibid.*, pp 575–580 criticising Mahoney PG (1997).

57 Macey JR, O’Hara M (2005) p 570: “In the prevailing competitive environment under which exchanges currently must operate, in contrast, there is little or no homogeneity of interests among the various constituencies of the exchange.”

58 See, for example, Regulation (EU) No 648/2012 (EMIR) on OTC trading and Article 23(1) of Regulation (EU) 600/2014 (MiFIR) laying down a mandatory trading obligation.

59 See Macey JR, Kanda H (1990) p 1022 on how the use of the same technology reduces transaction costs.

60 See Engelen E, Grote MH (2009) p 690: “At the same time, the remaining actors in Amsterdam have moved out of the crowded centre of Amsterdam to the periphery. Apparently, in a context of declining transaction costs, the gains from dedicated institutions, specialised labour market and knowledge spillovers do no longer exceed the costs of overcrowding. In the case of Frankfurt, foreign and domestic banks disseminated to other parts of Germany. The costs of maintaining a Frankfurt office no longer outweighed the benefits of profitable business on the basis of ‘local’ information once trade went virtual and market information became available in real time digitally …”

One should, therefore, ask whether issuers' agency costs associated with the use of external service providers for the operation of marketplaces ("buy") could be reduced by letting issuers organise this function internally ("make"). Issuers could then benefit from reduced agency costs and the generally lower transaction costs in digital economy.

If the answer is yes, the centralisation of trading on traditional stock exchanges could be complemented by competition between digital platforms for the organisation of microexchanges. Developers of digital platforms have incentives to reduce costs, because positive network effects are a driver of concentration according to the principle "winner takes it all". Developers of technological solutions might perhaps come up with innovative business models inspired by the large number of companies that currently are not listed on any traditional exchange and the fact that the investors expected to trade on a microexchange are mid-income or relatively well-off individuals. It would perhaps be useful for public equity markets if a larger share of R&D investments were allocated to regulatory change and the development of microexchanges.[61]

Moreover, if the focus is on retail rather than institutional investors, innovation is different. Small growth firms and retail investors have simple needs. If new marketplaces such as microexchanges do not need to speed up high-volume trading but may focus on the long-term interests of firms and retail shareholders that prefer the hold strategy, marketplaces perhaps can reduce the cost of technology. The total cost of IT can be brought down if standard solutions, cloud-based computing and standard platforms will be available to many issuers and retail investors.

The central functions. From the perspective of the issuer, there could be functional equivalents to traditional stock exchanges.[62] In order to be functional equivalents, the alternatives and traditional stock exchanges should have at least one common denominator.

Of the many functions of stock exchanges, two functions are central for the issuer-firm. They relate to trading and the function of shareholders. The choice of a stock exchange for the provision of these core services triggers even regulatory compliance obligations for the issuer-firm. This could be regarded as an ancillary service that complements stock exchanges' core services. The three relevant functions are thus as follows.

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61 Compare Floreani J, Polato M (2010) p 34: "Competitiveness of stock exchanges is … strictly dependent on innovation as for services provided to the customers and technology endowments."

62 Mues J (1999) p 24: "Für die Emittenten der Papiere hat die von der Börse wahrgenommene Allokationsfunktion … nur mittelbare Bedeutung."

First, a stock exchange provides a platform for trading and liquidity. The firm can benefit from such a platform. The firm can use a stock exchange listing as a tool when it manages the capital structure and share ownership structure of the company. The existence of a secondary market can make it easier for the firm to raise funding from capital markets at a lower cost and use shares as a means of payment. The existence of a secondary market for shares tends to improve the primary market as it increases liquidity and reduces investors' risk exposure. At an earlier stage, anticipated admission to trading on a marketplace can influence the choice of funding sources and funding instruments (such as SAFEs, convertible notes, or other convertible securities).[63]

Second, a stock exchange listing can facilitate the provision of shareholders' services. Shareholders can be a source of funding and/or provide ancillary services (in particular, monitoring and valuation services).[64] Generally, the existence of a secondary market influences the provision and cost of shareholders' services to the firm. The existence of a secondary market changes the governance of the firm as it increases transparency, compliance obligations, monitoring by market investors, exits, and the need to use structural takeover defences.[65]

Third, a stock exchange listing triggers regulatory compliance obligations. A stock exchange listing forces the firm to adapt to the regulatory framework. Regulatory compliance obligations change corporate governance. Expected regulatory compliance can signal the high quality of the firm and its shares. Such signals can increase trust, reduce transaction costs, and prevent a market for lemons.[66]

While these three functions are central for the issuer-firm, some functions do not really belong to stock exchanges. Rule-making is not a core function of stock exchanges. With the increasing scope and intensity of securities law, the role of stock exchanges as rule-makers has increasingly been taken over by the state. The earlier system of self-regulation became outdated when stock exchanges demutualised, incorporated, and went public as profit-seeking enterprises.[67] Shareholders' services are provided by shareholders rather than stock exchanges.

63 Green JM, Coyle JF (2016) pp 174–176.

64 Mäntysaari P (2010a) section 8.7.2; Mäntysaari P (2012) section 7.9. See also Mues J (1999) p 24. For the market for corporate control, see Manne HG (1965).

65 Mäntysaari P (2010c) Chapter 18. See also Article 10 of Directive 2004/25/EC (Directive on takeover bids) on various kinds of structural takeover defences.

66 Akerlof GA (1970) pp 499–500: "Numerous institutions arise to counteract the effects of quality uncertainty ... Licensing practices also reduce quality uncertainty. For instance, there is the licensing of doctors, lawyers, and barbers."

67 See already Macey JR, O'Hara M (2005) p 593.

Moreover, many functions can be allocated to the state (legislation), regulatory authorities (supervision and enforcement), or third parties (outsourcing).

From the perspective of the firm, this leaves one core function for functional equivalents to traditional stock exchanges: providing a platform for trading.[68] Trading has already been described "a commodity [and] a standard process".[69]

This said, the availability of a new way to organise trading in the company's shares could bring other benefits as well. It could turn illiquid unlisted shares – or "restricted securities"[70] – into more liquid assets. The use of a microexchange could prepare the firm for a listing on a traditional stock exchange. For firms that even could be eligible for a traditional listing, the most important benefit could be access to an alternative corporate governance regime. Generally, access to alternative corporate governance regimes could make it is easier for firms to choose the regime that makes them competitive in their core business. The corporate governance regime might be more important than the raising of cash for many firms. Unlisted growth firms can already raise cash in many ways, and mature listed firms tend to distribute cash to existing shareholders rather than raise cash by issuing shares to new investors.

Conclusion. For the issuer-firm, the central function of a stock exchange is to provide a platform for trading in the company's shares.

8.3 Design Principles and the Nature of Regulation: General Remarks

Microexchanges cannot be facilitated without amending existing stock exchange, company, and securities law. The scope of existing regulation should be limited in order to leave room for these marketplaces under a regulatory dualism strategy. A new legal framework should be created for these marketplaces.

Regulatory dualism. The regulatory framework for microexchanges should rely on regulatory dualism (section 6.3.12). Regulation generally may be based

68 For an opposite view and a longer list of functions for stock exchanges from a policy perspective, see Gadinis S, Jackson HE (2007) pp 1248 – 1250.

69 Macey JR, O'Hara M (2005) p 564.

70 In the US, SEC Rule 144(a)(3) identifies what sales produce restricted securities. Restricted securities are securities acquired in unregistered, private sales from the issuing company or from an affiliate of the issuer. Investors typically receive restricted securities through private placement offerings, Regulation D offerings, employee stock benefit plans, as compensation for professional services, or in exchange for providing seed money or start-up capital to the company.

on conflicting interests and theories.[71] In practice, the regulation of exchanges and securities markets tends to reflect the interests of incumbents[72] and create high barriers to entry for new financial intermediaries. It is easier to create an alternative to traditional financial intermediation if the regulation of existing intermediation business remains in place. Increased competition between alternative public markets could perhaps help to attract new kinds of financial intermediaries, increase competition between service providers, and reduce costs.[73] In the words of Justice Brandeis, "every proper means" should be used to reduce the power of the banker-middleman "where he is superfluous".[74]

The scope of existing regulation should thus be limited to leave room for a new regulatory regime. In practice, the company and the microexchange would need exemptions from the existing regulatory regime (section 8.9).

The fact that you would need exemptions in order to make microexchanges legally feasible could be interpreted in two ways depending on the preferred narrative.

On one hand, a critic could say that the scope and intensity of existing regulation reflect the necessary level of investor protection, the goal of ensuring a level playing field for different venues, and the general efficiency gains of a large market.[75] A decentralised exchange is not a meaningful exchange according to this view. Arguing for "a stock exchange for every company" (or at least for many companies that fulfil the requirements) would be chasing windmills or akin to asking for a castle for every man.[76]

On the other, the scope and intensity of existing regulation reflect regulatory capture and hamper technological and societal advancement. Ensuring a level playing field for all players means in effect that all players are required to play the same game: there is no competition between different games or between the players of the existing game and new games. In this case, there is even more reason to change existing regulation to address the lack of competition.

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71 Davies H (2015) pp 55–57.

72 Stigler GJ (1971); Calomiris CW, Haber SH (2014).

73 See, for example, Macey JR, O'Hara M (2005) p 567: "[T]he exchange itself is actually a firm in which the economic processes of trading are bundled and produced." See also Macey JR, Kanda H (1990) pp 1016–1017: "Investment bankers never lose because the securities brought to market in an initial public offering of securities generally trade at a significant discount to the prices of securities in the secondary trading markets."

74 Brandeis LD (1914) p 109.

75 See recitals 13 and 14 of Directive 2014/65/EU (MiFID II).

76 Sir Edward Coke famously argued in an unrelated context that "the house of every one is to him as his Castle and Fortress" (domus sua cuique est tutissimum refugium).

In the EU, the main regulatory practice is to apply the same legal framework to all organised trading venues.[77] Contrary to the spirit of Justice Brandeis, the EU is using "every proper means" to increase the power of the middleman.

Mandatory law. Like all marketplaces, the new marketplace needs rules.[78] The legal framework should help to create a good reputation for the new marketplace.[79] The new legal framework should be based on mandatory provisions of stock exchange, company, and securities law rather than self-regulation.

Rule-making has been regarded as one of the main functions of a stock exchange.[80] However, self-regulation increasingly has been replaced by government regulation in securities markets.[81]

When each issuer owns its own marketplace, transaction costs cannot sufficiently be reduced without external regulation. Standardisation would benefit all. Transaction costs, the risk exposure of investors, and the exposure of the firm to legal risk are reduced, if all similar marketplaces in the jurisdiction are governed by the same core rules. Moreover, the standardisation of the legal framework for the marketplace would increase the market for technological solutions, give an incentive to develop better technology, and reduce the cost of technology. The legal framework of the marketplace should therefore be laid down by sufficiently detailed and mandatory provisions of company law and securities law. The regulatory dualism strategy cannot mean a laissez-faire regulatory strategy for the microexchange.

Opt-in and exit mechanism. There should be an opt-in and exit mechanism. Company law should facilitate a mechanism for the company to opt in the microexchange regime and a mechanism for the company to exit the microexchange regime. At the same time, the interests of shareholders should be protected.

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77 See, for example, recital 13 of Directive 2014/65/EU (MiFID II) on how the new generation of organised trading systems should not benefit from regulatory loopholes; recital 5 of Regulation 648/2012/EU (EMIR) and Moloney N (2014) V.1.2.4, p 433 on the G20 commitment to closing regulatory gaps.

78 Generally, see Ostrom E (2010) p 420. See also Articles 33(3) and 53(2) of Directive 2014/65/EU (MiFID II).

79 Gadinis S, Jackson HE (2007) pp 1246 – 1248 on how rulemaking, monitoring, and enforcement efforts allowed stock exchanges to develop a brand.

80 Macey JR, Kanda H (1990) pp 1009 – 1010; Gadinis S, Jackson HE (2007) pp 1246 – 1248.

81 Macey JR, O'Hara M (2005) p 570: "Self-regulation in this new environment is bound to fail, because the homogeneity of interests that was critical to the success of the old model no longer exists." *Ibid.*, p 593: "[T]he current U.S. system of self-regulation may be ill-suited to regulating exchanges ..."

Companies should not be permitted to opt in the regulatory framework unless they fulfil statutory eligibility criteria (section 8.5). Such criteria should replace rules on the admission of financial instruments to trading.[82]

The most basic requirement should be the company form. The regime should for many reasons only be available to a new company form we call the small public limited-liability company (Chapter 9). This could be a way to keep the market distinct from the general start-up market and give successful larger firms incentives to change the company form and move to an established SME or main market.

Such a regime could be complemented by an authorisation requirement for the microexchange or the operator of the microexchange (for a similar requirement in crowdfunding, see sections 7.2 and 7.3). The competent financial supervision authority should at least monitor microexchanges.

Scope. The question of opt-in and exit is connected to the question of the scope of the regulatory regime for microexchanges.

The scope of the regulatory regime should be limited by limiting the eligibility of issuers. There should be a minimum size for the issuer measured by financial indicators. This requirement is connected to a balance between exemptions and investor protection.

To provide an alternative to the established regime, there should be an exemption for the new regime from much of the regulation of trading venues and from some provisions of traditional company law (section 8.10). Such exemptions are legitimate only where traders and shareholders are sufficiently protected and there is no material increase in systemic risk.

One may ask whether there should be a maximum size for the issuer under this regime. On one hand, a maximum size measured by financial indicators would ensure that there is a level playing field for relatively large firms. On the other, increasing choice for firms and retail investors could benefit both and there really is no level playing field for large firms for many reasons. Generally, large firms are governed by different regulatory frameworks depending on the country and the industry sector. There is no level playing field for listed companies worldwide due to the fact that company and securities laws are embed-

82 See, for example, the first subparagraph of Article 51(1) of Directive 2014/65/EU (MiFID II): "Member States shall require that regulated markets have clear and transparent rules regarding the admission of financial instruments to trading." The second subparagraph of Article 51(1) of Directive 2014/65/EU (MiFID II): "Those rules shall ensure that any financial instruments admitted to trading on a regulated market are capable of being traded in a fair, orderly and efficient manner and, in the case of transferable securities, are freely negotiable."

ded in different legal frameworks in each jurisdiction.[83] Moreover, many large firms have either remained private or gone private[84] and thus avoided the legal regime for listed companies. Much of economy is controlled by private equity management companies,[85] the business of which has benefited from regulation and remained outside calls for a level playing field so far. Many large firms are state-controlled companies. In practice, the right to choose the legal regime that is best aligned with the interests that firms prefer to pursue would make it easier for firms to adapt to competition. There should be no maximum size for the issuer under the microexchange regime.

Incentives. The new regulatory regime should provide proper incentives. The incentive mechanism should reflect the purpose of the new regime and the particular interests of the firm and the most important stakeholders.

The proposed regime has two main purposes. The first is to increase the number of companies with publicly-traded shares. The second is to increase retail investors' direct equity investments. The proposed regime should thus foster the interests of firms and controlling shareholders on one hand and align the interests of controlling shareholders and retail investors on the other.

To achieve this, regulators can use mandatory provisions on disclosures, integrity, and share dealings. There should be sanctions and an enforcement mechanism. Since controlling shareholders cannot be expected to enforce sanctions against themselves, a third party should have power to enforce sanctions in the event that the statutory standards are breached. Duties under securities law and criminalisations should therefore be used to create a public enforcement mechanism (section 2.4.11).

Cross-border or national regime. The new regime is embedded in the company and securities laws of the issuer's home country. One may ask whether the regime should be adapted to cross-border investment.

On one hand, complexity increases sharply in cross-border transactions. Complexity, risks, and costs can be reduced if the regime is primarily designed for investors in the issuer's home country.

On the other, the regime is more attractive to developers of technology, retail investors, and issuer-firms, if it enables cross-border investment. In the EU, it would not be possible to prohibit incoming cross-border investment, because any discrimination on grounds of nationality is prohibited under Treaty law.[86]

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83 See, for example, La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (2008). See also The Economist, Fumbling in the dark, 12 July 2018.

84 See Gao X, Ritter JR, Zhu Z (2013).

85 See Jensen MC (1989) for "LBO associations" as conglomerates.

86 Article 18 of the Treaty on the Functioning of the European Union.

Design principles. We recommend various design principles to facilitate the microexchange as a new kind of trading venue.

First, regulators should rely on the trend of increasing decentralisation of stock exchanges and trading (section 3.2.6) and the trend of increasing centralisation of digital platforms.

Second, the regulatory framework for microexchanges should rely on regulatory dualism (section 6.3.12). The vested interests of incumbents would make it difficult to change the regulation of traditional exchanges.

Third, the regulatory regime should primarily foster the interests of issuer-firms (sections 6.2.4 and 6.3.8).

Fourth, the functions of the microexchange as an exchange should be scaled down to its core function to the firm. If the functions of the microexchange are reduced to the bare essentials, regulation can be simplified and costs can be kept lower. The core function of the microexchange is to provide a platform for secondary trading in the company's shares (section 8.2).[87] When the microexchange is designed as a secondary market only, it can be kept simple (section 5.4.3).

Fifth, operational and trading costs should be kept kept low. Low trading costs can increase turnover and reduce the cost of capital.[88]

Sixth, the microexchange should belong to a wholly-owned subsidiary of the issuer. This could help to slow down the concentration of capital markets and the emergence of large global intermediaries. Moreover, ownership by the issuer itself could make it more legitimate to create exemptions from the financial regulatory regime as there is no reason to create exemptions for the benefit of large global intermediaries. Where the microexchange belongs to the issuer, the microexchange should be ring-fenced from the assets of the issuer. The incorporation of an SPV is a traditional way to ring-fence assets.

Seventh, there should be eligibility criteria for companies that may use a microexchange and for the operator of the microexchange.[89]

Eight, the outsourcing of functions should be permitted. It is necessary to rely on the outsourcing of heavily regulated functions and on the use of digital platforms. The mechanisms of platform economy and the advancement of fintech

87 According to Gadinis S, Jackson HE (2007) pp 1246 – 1248, "regulating the trading process was the primary goal behind the establishment of organized stock markets".

88 Domowitz I, Steil B (2002) p 314: "We find that reductions in trading cost have an enormous stimulative effect on turnover, but that increased turnover in large capitalization issues does not itself have a material effect on the cost of equity. Rather, reductions in trading cost have a significant and direct causal effect on declines in the cost of equity." See also *ibid*., p 324 and Table 12.8.

89 See Gadinis S, Jackson HE (2007) pp 1246 – 1248 on the purposes of stock exchange rules.

can result in the emergence of new kinds of service providers (section 6.4.16). As an alternative to the centralisation of trading and stock exchange functions within a small number of traditional stock exchanges,[90] trading can be decentralised to microexchanges and the necessary technology and services can be centralised to digital service providers. In other words, trading and technology can be unbundled. Industry can produce software that can be downloaded and used to bring counterparties together.[91] To create room for innovation, regulation should preferably lay down organisational objectives rather than prescribe a certain organisational framework.[92] But some organisational standardisation is necessary to create a new marketplace. Demand for new technology and services could attract even established banks and exchange operators to the new market.[93]

Ninth, liquidity should be managed by the use of call auctions to match bids. Moreover, liquidity should be managed by restricting trading to the microexchange. This is because liquidity can depend on the fragmentation of buying and selling interests among different marketplaces (the spatial dimension) and over time (the temporal dimension).[94]

Tenth, the regulation of microexchanges should be based on mandatory provisions of law.

Eleventh, microexchanges should be supervised by the state. Laws should be enforced by the state.

Twelfth, the microexchange should be reserved for the small public limited-liability company, a new company form proposed in this book (section 6.4.14 and Chapter 9). The regulation of the microexchange should thus be complemented by specific company law rules.

90 Paragraph 61 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995–Deutsche Börse / London Stock Exchange); Macey JR, Kanda H (1990) p 1022.

91 Peter Van Valkenburgh. There is no such thing as a decentralized exchange. Op-ed. The Block, 3 October 2020.

92 Fleckner AM, Hopt KJ (2013) p 551.

93 Deutsche Börse AG, Celent (2016) pp 15 – 16: "There is nothing precluding large market infrastructure providers from leveraging their market operation expertise in financial and large corporate domains, in order to act as the point of encounter between idle capital in hands of private investors and cash-rich corporations, and the need for growth capital from small businesses across the world. This is a trend for financial market infrastructure organizations to capitalize on for many years, providing new solutions to the market in the realm of funding and financing."

94 Schwartz RA (2000).

8.4 The Operator and the Central Counterparty

According to our proposal, the microexchange should belong to a wholly-owned subsidiary of the issuer. The issuer should be a “small public limited-liability company” (Chapter 9). The actual operation of the trading platform could be done internally or outsourced to a service provider.

The choice of the operator and central counterparty design will influence much of the legal framework. In principle, there could be alternative designs. Full integration with the issuer acting as the operator of the marketplace and the central counterparty under one legal entity would not work, because it would increase the risk exposure of investors and make it difficult for the issuer to ensure regulatory compliance. The better alternative therefore could be to reduce risks by using a special-purpose vehicle (SPV) as the nominal owner of the marketplace.

SPVs customarily are used in financial risk management to ringe-fence assets. An SPV would help to separate the assets of the SPV and traders from the assets of the issuer and avoid company law restrictions on the purchase and sale of own shares. The downside is that it would be necessary to regulate the rights and duties of both the issuer and the SPV, and regulatory compliance would still be a problem. Since the SPV lacks resources, it should be made possible to outsource the actual operation of the platform and central counterparty functions.

In any case, regulatory compliance can be made easier and risks can be reduced by the outsourcing of central counterparty functions. Central counterparties tend to be used for the purpose of reducing counterparty risk and systemic risk. The regulatory trend is to make central counterparties and clearing mandatory for all standardised trading.[95]

In the future, the introduction of central bank digital currencies such the digital euro will have implications for the functioning of the payment system. Depending on how central bank digital currencies are designed, they can have a disruptive effect on settlement[96] and the organisation of the functions of a microexchange.

95 See recital 5 of Regulation 648/2012/EU (EMIR) on the 2009 Pittsburgh agreement.
96 See ECB (2020) p 20; BIS Annual Economic Report 2021, III. CBDCs: an opportunity for the monetary system.

8.5 Eligibility

There should be an opt-in and exit mechanism and eligibility criteria for companies that want to use the microexchange.

Eligibility criteria have an important signalling function.[97] They can help to signal to investors that companies that use the microexchange are serious and that they may have better survival prospects than early-stage ventures in general. Eligibility criteria could thus help to prevent a lemons market, increase share price, reduce issuers' funding costs, and increase the success rate of companies that use the microexchange.

Such eligibility criteria can only be based on mandatory provisions of law in the absence of other external regulators (section 6.4.13). They should apply to the issuer, the trading venue, and the SPV that is the nominal owner of the trading venue.

It is customary to use various kinds of eligibility criteria on established stock exchanges. They apply to professional trading participants that have direct access to the exchange,[98] to issuers, and to stocks.[99]

The basic requirement should be to permit the use of a microexchange only for "small public limited-liability companies" (Chapter 9). The sole shareholder of the SPV that owns the microexchange should thus be a new kind of legal entity. Much of the regulation of microexchanges could then be based on company law.[100]

The issuer should have a track record as a condition for the use of a microexchange.[101] A track record is a customary requirement on SME exchanges (section 3.5.3).

Some of the qualitative requirements laid down by MiFID II could serve as a model for the eligibility criteria applied to the issuer and sole shareholder of the SPV. For example, it could be required that (a) the issuer and the SPV have adequate organisational arrangements,[102] (b) members of the issuer's and the

97 For listing as a signalling service, see Macey JR, Kanda H (1990) pp 1023–1024; Gadinis S, Jackson HE (2007) pp 1246–1248.

98 Gadinis S, Jackson HE (2007) pp 1246–1248.

99 *Ibid*., pp 1246–1248.

100 Aggarwal R, Ferrell A, Katz J (2007): "The likely emergence of 'global' exchanges that are the product of these cross-border mergers raises the pressing question of how these global exchanges are going to be regulated."

101 Ibrahim DM (2013) p 253: "Most market investors are not interested in funding start-ups due to their lack of a track record, high failure rate, and lack of liquidity. However, two types of investors do specialize in these investments: angel investors and VCs."

102 Point (c) of Article 53(3) of Directive 2014/65/EU (MiFID II).

SPV's administrative bodies are of sufficient good repute, and (c) members of the issuer's or SPV's administrative bodies have a sufficient level of trading ability, competence and experience.[103]

Moreover, some of the requirements of MiFID II could serve as a model for the suspension and removal of the issuer's shares from trading on the microexchange. For example, the competent financial supervision authority could order the suspension or removal of the issuer's shares from trading on a microexchange where either the issuer, the SPV, or the shares "no longer [comply] with the [applicable] rules … unless such suspension or removal would be likely to cause significant damage to the investors' interests …"[104] The competent financial supervision authority should have a right and duty to "suspend or remove that [share] from trading, where the suspension or removal is due to suspected market abuse, a take-over bid or the non-disclosure of inside information about the issuer or financial instrument … except where such suspension or removal could cause significant damage to the investors' interests …"[105]

8.6 Excursion: Market Design and Liquidity

Liquidity has played an important role in the regulation of stock markets.[106] However, liquidity can mean different things to different markets participants. For example, liquidity is not the same thing for retail investors as it is for fund managers or high-frequency traders. Demand for different types of liquidity may have contributed to product/service differentiation and the emergence of different types of trading venues.[107]

103 Points (a) and (b) of Article 53(3) of Directive 2014/65/EU (MiFID II) on access to a regulated market.

104 Article 32(1) of Directive 2014/65/EU (MiFID II). See also Article 52(1).

105 Second subparagraph of Article 32(2) of Directive 2014/65/EU (MiFID II). See also second subparagraph of Article 52(2).

106 Moloney N (2014) V.1.2.2, p 429: "The regulation of trading venues is primarily directed to ensuring market integrity, efficiency, and stability; in support of these aims, it has long been associated with protecting liquidity."

107 Paragraph 63 of Commission Decision of 29 March 2017 declaring a concentration to be incompatible with the internal market and the functioning of the EEA Agreement (Case M.7995–Deutsche Börse / London Stock Exchange): "Product/service differentiation either through superior product features or through unique selling points may help to mitigate or to overcome the network effects and sort users to different platforms thus permitting the co-existence of rival platforms."

For the issuer, liquidity is not an end. The issuer uses liquidity to reach its own objectives. It is not in the interests of the issuer to maximise liquidity as such. The issuer needs sufficient liquidity for its own purposes (sections 6.3.15 and 8.7).

Whether a marketplace can ensure sufficient liquidity depends on market design. There are different market designs in modern stock markets (section 3.3.2)[108] One can distinguish between order-driven markets, quote-driven markets, brokered markets, and hybrid markets.

Order-driven markets. There is great variation in how order-driven markets operate. Where the order-driven market is a call market, all traders trade at the same time when the market is called. In continuous trading, traders can trade whenever they want. In single-price auctions, all trades are arranged at the same price following a market call. In continuous two-sided auctions, buyers and sellers continuously attempt to arrange their trades at prices that vary through time.

Continuous trading is the most popular choice for leading stock exchanges. Illiquidity can nevertheless be a problem in two cases, namely when the stocks are mid- or small-cap stocks and when a trading session opens, closes, or restarts.

To deal with illiquidity, continuous order-driven stock markets can open and close their trading sessions with a single price call market auction. For example, Deutsche Börse and Euronext (Paris) use calls to trade their least active securities. Moreover, designated market makers can be used for mid- and small-cap stocks.

Market makers. It is customary to use market makers as liquidity providers. Designated market makers are dealers that have a duty to sell to buyers and buy from sellers. Market makers provide liquidity to others but need liquidity themselves to balance their transactions.

Depending on the exchange, market makers generate income from bid-ask spreads,[109] arbitrage,[110] and/or incentive contracts with issuers.[111] Because of

108 See, for example, Charitou A, Panayides M (2009).

109 Glosten LR, Milgrom PR (1985) p 72.

110 See, for example, Nasdaq Stock Market Rule 4613: “A member registered as a Market Maker shall engage in a course of dealings for its own account to assist in the maintenance, insofar as reasonably practicable, of fair and orderly markets in accordance with this Rule.” SEC Release No. 34 – 51808 (June 9, 2005) (Regulation NMS), II.A.1(b), p 75: “Excessive transitory volatility … may provide benefits in the form of profitable trading opportunities for short-term traders or market makers, but these benefits come at the expense of other investors, who would be buying at artificially high or selling at artificially low prices.”

their contribution to liquidity, it may be reasonable to exempt them from paying trading fees.[112] If there are two or more market makers per stock, competition between them creates an incentive to reduce bid-ask spreads.

Quote-driven markets. In quote-driven markets, prices are set by dealer quotes. In other words, dealers make the market and supply all the liquidity.

While the NYSE traditionally is an order-driven market and the London Stock Exchange operates a market making scheme in accordance with MiFID II,[113] the Nasdaq Stock Market traditionally is a quote-driven market.[114]

Brokered markets. In brokered trading systems, brokers actively search to match buyers and sellers. Brokered markets tend to be illiquid and lack transparency.

Hybrid markets. Hybrid markets mix the characteristics of order-driven, quote-driven, and brokered markets. Most exchanges have hybrid structures. Since the late 1990s, major markets around the world have been designed as hybrids: "A hybrid structure can sharpen price discovery, provide enhanced liquidity, and help to stabilize a market under stress. Market makers play a vital role in

111 Not on Nasdaq. See Nasdaq Stock Market Rule 2460(a) on payments for market making: "No member or person associated with a member shall accept any payment or other consideration, directly or indirectly, from an issuer of a security, or any affiliate or promoter thereof, for publishing a quotation, acting as market maker in a security, or submitting an application in connection therewith."

112 See Demarchi M, Foucault T (2000).

113 See Rules 4400 to 4412 of the Rules of the London Stock Exchange.

114 For the Nasdaq Stock Exchange, see Rule 4613 Market Maker Obligations: "A member registered as a Market Maker shall engage in a course of dealings for its own account to assist in the maintenance, insofar as reasonably practicable, of fair and orderly markets in accordance with this Rule." Rule 4613(a)(1) Two-Sided Quote Obligation: "For each security in which a member is registered as a Market Maker, the member shall be willing to buy and sell such security for its own account on a continuous basis during regular market hours and shall enter and maintain a two-sided trading interest ('Two-Sided Obligation') that is identified to the Exchange as the interest meeting the obligation and is displayed in the Exchange's quotation montage at all times. Interest eligible to be considered as part of a Market Maker's Two-Sided Obligation shall have a displayed quotation size of at least one normal unit of trading (or a larger multiple thereof); provided, however, that a Market Maker may augment its Two-Sided Obligation size to display limit orders priced at the same price as the Two-Sided Obligation. Unless otherwise designated, a 'normal unit of trading' shall be 100 shares. After an execution against its Two-Sided Obligation, a Market Maker must ensure that additional trading interest exists in the Exchange to satisfy its Two-Sided Obligation either by immediately entering new interest to comply with this obligation to maintain continuous two-sided quotations or by identifying existing interest on the Exchange book that will satisfy this obligation."

the hybrid structure, and call auction and continuous trading together in a hybrid structure strengthens an order-driven market."[115]

In practice, hybrid markets mean the combined use of continuous trading, call auctions, and designated market makers. For example, the Frankfurt Stock Exchange (FWB) distinguishes between three models for the trading of securities: the auction model, continuous trading with intra-day auctions, and continuous auction.[116] These models can be combined with market makers and specialists.[117]

The call auction has been an important part of the hybrid market structures of the French, German, and Israeli exchanges in the past.[118]

Conclusion. The microexchange, that is, a trading platform for the shares of one issuer only, should be based on the use of single-price call auctions and preferably a market maker. We can have a closer look at call auctions and market makers as a way to ensure sufficient liquidity in the next section (8.7).

8.7 Sufficient Liquidity

8.7.1 General Remarks

From the perspective of the issuer-firm, market "liquidity" and market "efficiency" are not ends. Whether they are means to reach an end depends on the firm, since firms use different kinds of tools and practices to reach their own objectives. In any case, liquidity matters for issuers, investors, and the operators of traditional exchanges.

From the perspective of the issuer-firm, the most important function of a stock exchange is to provide a platform for trading or "to provide liquidity for listing firms".[119] The issuer customarily does not trade in its own shares and receives no money when its shares change hands in secondary trading. An issuer may nevertheless be able to benefit from the liquidity of its shares indirectly as liquidity is a factor that can reduce investors' perceived risk exposure, reduce in-

115 Gu AY (2005).

116 § 66 of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020).

117 § 102(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020).

118 For call auctions in a hybrid market structure, see Schwartz RA (ed) (2001).

119 Macey JR, Kanda H (1990) pp 1010 – 1011: "The most widely understood function of an organized exchange is to provide liquidity for listing firms."

vestors' direct and indirect trading costs, increase share price, and help to bring down the firm's funding costs.[120]

Investors' costs are increased by illiquidity and reduced by liquidity. Illiquid assets can take a long time to sell. There are greater opportunity costs the longer it takes to sell the assets. It might only be possible to sell illiquid assets at a discount,[121] and it might be impossible to sell illiquid assets in bad times when liquidity generally dries up. Since short-term illiquidity matters less where investors have longer investment horizons, investors with the shortest horizons hold securities with the lowest trading costs and investors with the longest horizons can hold securities with higher trading costs.[122] In the light of the growth of closed-end investment funds with restrictions on exit, such restrictions seem to be acceptable to many long-term investors.[123]

Liquidity matters for exchange operators as well. High liquidity can bring more trading activity and enable operators to increase their revenue. They will then have more money to spend on technology that helps them to increase liquidity even more.[124]

Since liquidity seems to matter a great deal, coping with low liquidity and low daily turnover would be an obvious challenge for the proposed microexchange for four main reasons.

First, liquidity can be reduced when the trading system is decentralised.

Second, low liquidity and low daily turnover are to some extent caused by the characteristics of the issuer. Regardless of where an SME's shares are traded, liquidity and turnover are likely to be hampered by the small number of outstanding shares, a concentrated share ownership structure, or a small free float.[125] Such issuer characteristics can increase both information asymmetry and illiquidity.[126]

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120 See *ibid.*, p 1013; Engelen E, Grote MH (2009) p 684.

121 Engelen E, Grote MH (2009) p 684.

122 Amihud Y, Mendelson H (1986).

123 See Morley J (2014) on investment funds.

124 See Engelen E, Grote MH (2009) p 684.

125 See, for example, point (17) of Article 2(1) of Regulation (EU) 600/2014 (MiFIR) according to which a "liquid market" for a financial instrument that is traded daily is assessed according to the following criteria: (i) the free float; (ii) the average daily number of transactions in those financial instruments; (iii) the average daily turnover for those financial instruments. For the definition of a "liquid market" for shares, see Article 1(1) of Delegated Regulation (EU) 2017/567: "For the purposes of Article 2(1)(17)(b) of Regulation (EU) No 600/2014, a share that is traded daily shall be considered to have a liquid market where all of the following conditions are satisfied: (a) the free float of the share is: (i) not less than EUR 100 million for shares admitted to trading on a regulated market; (ii) not less than EUR 200 million for shares that are only traded

Third, liquidity and turnover depend to some extent on the marketplace. Trading on a small marketplace may result in lower turnover and lower liquidity. Generally, securities listed on a large and famous exchange tend to be more popular with investors than securities listed on an obscure exchange. Since the use of an exchange is not cost-free, investors only trade on a limited number of exchanges. Increased visibility and comparability connected to the existence of many listed securities on the same exchange can be expected to increase trading and liquidity (regardless of the fact that the number of other issuers on one and the same stock exchange or different connected exchanges neither increases the number of a particular company's shares nor reduces its concentrated share ownership structure). Moreover, the large size of the marketplace feeds into the ability of the exchange operator to invest in technology designed to increase liquidity and reduce transaction costs.[127]

Fourth, liquidity can depend on the investor and the share block. Some investors may face higher transaction costs than others.[128] Moreover, if sold on an exchange, a large block of SME shares owned by an institutional investor may be more illiquid than a small block of shares owned by a retail investor regardless of how the exchange is organised.

In any case, the problem of low liquidity and low daily turnover on a microexchange could be addressed in five main ways.

It could be addressed by reducing trading fragmentation. Liquidity is hampered less if all organised trading in a stock is concentrated on one microexchange. For example, the SEC applies a similar approach in the regulation of equity crowdfunding. Each Regulation Crowdfunding offering must be exclusively conducted through one online platform.

Liquidity could be addressed by making the exchange work for long-term retail investors with small holdings rather than short-term institutional investors

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on MTFs; (b) the average daily number of transactions in the share is not less than 250; (c) the average daily turnover for the share is not less than EUR 1 million." For the calculation of the "free float", see Articles 1(2) and 1(3) of Delegated Regulation (EU) 2017/567. For the calculation of the "daily turnover of a share", see Article 1(4) of Delegated Regulation (EU) 2017/567. For a "liquid market" following the first admission of a share to trading, see Article 1(5) of Delegated Regulation (EU) 2017/567.

126 Glosten LR, Milgrom PR (1985) is a classic analysis. See also Bessembinder H, Hao J, Zheng K (2015) p 1999.

127 Engelen E, Grote MH (2009) p 684.

128 Merton RC, Bodie Z (2005) p 6 on transaction costs at the turn of the millennium: "In reality most investors face substantial transactions costs and cannot trade even approximately continuously. But in a modern, well-developed financial system, the lowest-cost transactors may have marginal trading costs close to zero, and can trade almost continuously."

with large holdings. Generally, the large trades of institutional investors can reduce liquidity and increase volatility.[129]

Liquidity could be addressed by rules on the matching of bids (section 3.3.2). To adapt the trading mechanism to low volumes and to increase liquidity for long-term retail investors, regulators could use periodical call auctions rather than continuous matching of bids. In other words, investors could be made to trade more patiently.[130] Moreover, it would be preferable to use market makers.

Liquidity could be addressed by managing the level of transparency. On one hand, rules on pre- and post-trade disclosures can increase transparency and liquidity.[131] On the other, liquidity can sometimes be increased by reducing transparency.[132]

Finally, liquidity could be addressed by reducing costs. Costs can be reduced by creating positive network effects. A microexchange should be able to use a service provider's digital platform with two-sided network effects. Depending on the service provider's business model, costs should be shared by many issuers and other parties.

In the following, we will study how call auctions (section 8.7.2) and designated market makers (DMMS, sections 8.7.3 and 8.7.4) can help to increase liquidity. We will also study whether to facilitate block trading (section 8.7.5).

8.7.2 Call Auctions

The customary way to address the low liquidity and low daily turnover of mid- and small-cap stocks is to use call auctions as an alternative to continuous trading. In a call market, the price of an asset is determined through an auction sys-

129 Ben-David I, Franzoni FA, Moussawi R, Sedunov J (2020).
130 Schwartz RA (2001): "An important way in which institutional investors can control trading costs is by trading patiently. Yet, there is a belief that investors, when they decide to trade, want to trade as quickly as possible (i. e., that they demand immediacy). Thus, an often-cited disadvantage of call auction trading is that it denies participants continuous access to the market."
131 See, for example, Moloney N (2014) V.1.2.3, p 430: "[T]he publication of trade transparency data plays a major role in ensuring that prices reflect supply and demand and that a trading venue is liquid and efficient."
132 *Ibid.*, V.1.2.3, p 431: "But there is a trade-off between transparency and liquidity, as transparency requirements are acutely sensitive to different trading functionalities and can prejudice liquidity in some circumstances ... The liquidity risks can be acute with pre-trade transparency disclosures."

tem in which a single price applies to all transactions.[133] A call auction is preceded by a period of non-trading.

There is a call auction when the market is called for a security and orders are accumulated for simultaneous execution at a single price and at a predetermined time.[134] The only way to trade with certainty at a call market price is to participate in the call. During the order accumulation period, only indicated clearing prices are shown. After the call has been completed and the actual clearing price determined, the process is complete and the call auction is closed.[135]

There are different auction designs. Economides and Schwartz distinguish between a price-scan auction, a sealed bid/ask auction, a crossing network, and an open order book auction.[136]

Better liquidity with call auctions. By definition, call auction trading denies continuous access to the market. It forces investors to trade patiently.[137] It also prevents high-frequency trading.[138]

While continuous trading is regarded as the best choice for large-cap shares, it is generally assumed that call auctions are suitable for thinly traded securities such as small-cap shares. Call markets are "credited with better liquidity and price discovery as all traders are interested in a security trade at a specific time and place. As a result, traders can find the counterpart for the transaction relatively easier."[139]

In other words, "transaction costs for small transactions in the call market are lower than the quoted spread in the order book of the continuous market" and "transaction costs for large transactions in the call market are higher than

133 Thomas S (2010) p 6.
134 Acharya R, Gaikwad V (2014) Section 1.
135 Schwartz RA (2000). For example, call auctions are customarily used in electricity spot markets. In the Nordic and Baltic market, all producers are paid according to the calculated area price, and similarly all consumers pay the same price. For block orders, the same principle applies. If the block is accepted, the consumer/producer pays/gets the area price.
136 See Schwartz RA (2001): "(1) In a *price-scan auction*, an auctioneer announces tentative prices and traders state their buy/sell responses until the price that best balances the buy and sell orders is found. (2) In a *sealed bid/ask auction*, traders submit priced orders that are not disclosed to one another. (3) In a *crossing network*, traders submit orders that are matched at a price determined in some other market (i.e., trades are priced for the Posit crosses using midspread values established in the major market center at the time of a cross). (4) In an *open order book auction*, traders follow the market as buy and sell quantities are cumulated and displayed at each price, along with a continuously updated indicated clearing price, until the market is called."
137 Schwartz RA (2001).
138 See Budish E, Cramton P, Shim J (2015).
139 Acharya R, Gaikwad V (2014) Section 1.

the spread in the continuous market".[140] Continuous trading gives large-cap shares an added advantage in the competition for order flow but can increase the valuation of both large-cap and small-cap stocks on the exchange.[141]

Call auctions in the history of stock exchanges. Call auctions have their place in the history of stock exchanges. This can be illustrated with the practices of the New York Stock Exchange (NYSE), the Paris Bourse, and emerging markets.

The NYSE started with few traders and low trading volumes. Auctions suited the small markets of the late eighteenth century and were carried over into the nineteenth century. The NYSE ran a daily call auction for listed stocks from 1817 to 1869.[142] A rival method to auctions was developed outside the NYSE.[143] The call auction was abandoned when the NYSE merged with The Open Board of Brokers in 1869. The NYSE had to adopt continuous trading as a means of accommodating large numbers of stocks and traders in a single physical location.[144]

The nineteenth-century Paris Bourse with its tâtonnement process has often been regarded as a "real call market".[145] The tâtonnement process used to be understood as a process in which a market official calls the name of a security and finds the price at which the market supply and demand quantities are equal.[146] The practices of the Paris Bourse have therefore been described as follows: "[G]overnment-appointed 'agents de change' met on the Paris Bourse once a day at the same time to trade stocks for a limited period, usually an hour. An exchange official opened trading by means of a 'Call' of the stocks on an official 'List'. Calling each stock in turn he proposed an opening price, and brokers responded by signaling the size of their bids and offers. New prices were proposed until the market-clearing price was discovered. All orders to buy or sell at this price, and as many as possible to buy at a higher or sell at a lower price, are executed. There is thus a 'single price' for all trades. This is the 'official' price fix. Once the last stock's price is fixed, the market is over and trading is suspended until the following day."[147]

140 Kehr CH, Krahnen JP, Theissen E (2001) p 251.
141 Kalay A, Wei L, Wohl A (2002) p 526.
142 Sobel R (1977) p 28.
143 *Ibid.*, p 29.
144 Domowitz I, Steil B (2002) p 315; Schwartz RA (2001).
145 Kregel JA (1995) p 460. See Walker DA (2001) p 188.
146 Walker DA (2001) p 186.
147 Kregel JA (1995) pp 459–460, cited in Walker DA (2001) p 188. The nineteenth-century practices of the Paris Bourse were described by Léon Walras. See Walker DA (2001) p 187.

While such a description of the tâtonnement process has played a role in economic theory,[148] this is not how the Paris Bourse really worked.[149] The agents did not operate in call markets but in continuous markets.[150] Agents negotiated directly with each other. There were even unofficial markets called the coulisse. A given security was sold at a variety of prices. A client could specify that it be bought and sold at its average price for the session. When two such orders coincided, the transaction was closed but the price was open.[151]

In any case, there have been many call auction systems. In the 1990s, many call auction systems were replaced by electronic and continuous trading. For example, the Tel Aviv Stock Exchange (TASE) had by 1997 replaced its pure call system with an electronic continuous trading system.[152]

Call auctions traditionally have been used in emerging markets.[153] In 2013, the Securities and Exchanges Board of India ordered thinly traded stocks to be traded only through an hourly call auction system. The change was motivated by the need to curb malpractices. Many companies on the Bombay Stock Exchange were moved to the call auction system.[154]

Modern exchanges can use various kinds of auctions. For example, Long-Term Stock Exchange (LTSE) may use Opening Auctions, Closing Auctions, IPO and Halt Auctions, and Volatility Auctions.[155] Call auctions are often used at the opening and closing of the market to increase informational efficiency.[156]

The way a call auction works can be illustrated with the practices of Wiener Börse, the Vienna Stock Exchange. Its Trading Rules for the Xetra®[157] facilitate three trading procedures: (1) auction; (2) continuous trading; and (3) continuous auction.[158] The Trading Rules lay down the process for auction trading. In this

148 See Walker DA (2001) p 186.
149 *Ibid.*, p 187.
150 *Ibid.*, p 196.
151 *Ibid.*, pp 192–194.
152 Amihud Y, Mendelson H, Lauterbach B (1997).
153 Charitou A, Panayides M (2009) p 53.
154 Thomas S (2010); Agarwalla SK, Jacob J, Pandey A (2015). BSE publishes periodical lists on illiquid scrips to be traded in periodic call auctions. On 13 January 2020, there were 400 companies on the list.
155 SEC Release No. 34–85828 (May 10, 2019), III.C.
156 Comerton-Forde C, Rydge J (2006); Walker DA (2001) p 186; Ibikunle G (2015) pp 209 and 225.
157 Wiener Börse, Special General Terms and Conditions of Business (Special Terms) of the Vienna Stock Exchange in its Function as Securities Exchange, 2.1 Trading Rules for the Trading System Xetra® (Exchange Electronic Trading) (18 November 2019).
158 *Ibid.*, § 4(1).

case, orders are either market orders or limit orders. An algorithm determines a price at which the largest volume of orders can be executed with the lowest number of surplus orders remaining. Market orders have priority. There is a call phase and a price determination phase. During the call phase, exchange members may enter, modify or delete orders.[159]

Call auctions at the opening and closing of the market. Call auctions are often used at the opening and closing of the market.

The opening of the market is preceded by a long period of non-trading. This makes it important to use a mechanism for price discovery before the market opens. In the history of stock exchanges, a well-known example is the fixing of an opening price by a price setter on the NYSE.[160] Closing prices are generally used to mark the positions to market and for settling derivative contracts.[161]

The practices of Wiener Börse are a modern example of the use of call auctions at the opening and closing of the market. Its Trading Rules for the Automated Trading System Xetra®[162] describe how continuous trading starts with an opening auction and ends with a closing auction.[163]

Excursion: Price discovery in Spotify's direct listing. Since a call auction is preceded by a period of non-trading, it requires a particular price discovery mechanism. Price discovery is a problem even in direct listings in which the opening of trading is not preceded by any trading activity and there are no underwriters (section 6.4.2). Price discovery mechanisms used in direct listings might therefore be functional equivalents to the mechanisms used in call auctions. For this reason, we can have a look at Spotify's direct listing.

Spotify chose a direct listing on the NYSE. Spotify described the price discovery mechanism in its prospectus (Form F-1 registration statement) as follows:[164]

– "The DMM acting pursuant to its obligations under the rules of the NYSE, is responsible for facilitating an orderly market for our ordinary shares. Based on information provided by the NYSE, the opening public price of our ordi-

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159 *Ibid.*, § 4(2).

160 See Walker DA (2001) p 186 citing a letter of John Maynard Keynes dated 9 December 1934: "A tatonnement process with a price setter, Keynes believed, 'is the actual method by which the opening price is fixed on the Paris Bourse even today … As a matter of fact, this is also the method by which opening prices are fixed on Wall Street.'"

161 Acharya R, Gaikwad V (2014) Section 1.

162 Wiener Börse, Special General Terms and Conditions of Business (Special Terms) of the Vienna Stock Exchange in its Function as Securities Exchange, 2.1 Trading Rules for the Trading System Xetra® (Exchange Electronic Trading) (18 November 2019).

163 *Ibid.*, § 4(3).

164 Spotify Technology S.A., Form F-1 registration statement filed with the SEC on 28 February 2018, Plan of Distribution.

nary shares on the NYSE will be determined by buy and sell orders collected by the NYSE from various broker-dealers and will be set based on the DMM's determination of where buy orders can be matched with sell orders at a single price."

- "Similar to how a security being offered in an underwritten initial public offering would open on the first day of trading, before the opening public price of our ordinary shares is determined, the DMM may publish one or more pre-opening indications, which provides the market with a price range of where the DMM anticipates the opening public price will be, based on the buy and sell orders entered on the NYSE. The pre-opening indications will be available on the consolidated tape and NYSE market data feeds. As part of this opening process, the DMM will continue to update the pre-opening indication until the buy and sell orders reach equilibrium and can be priced by offsetting one another to determine the opening public price of our ordinary shares."
- "On the NYSE, buy orders priced equal to or higher than the opening public price and sell orders priced lower than or equal to the opening public price will participate in that opening trade."

Conclusion. The proposed microexchange could be based on a call auction system. Depending on trading volumes, prices could be fixed on a weekly, fortnightly, or monthly basis. For larger firms with bigger trading volumes, prices could be fixed more often. There are earlier models for the use of call auctions. A call auction for microexchanges could even resemble the price discovery mechanism that is used in a direct listing when the opening of trading is not preceded by any trading activity.

8.7.3 Designated Market Makers

It can be difficult to match buyers and sellers of small-cap stocks. To address this problem, it is customary to use middlemen to "hold the inventories that facilitate trade when trading occurs over time".[165] Market makers in the stock market basically have the same function as gold dealers in the unregulated gold bar or coin market.

Designated market makers (DMMs) generally can improve liquidity, reduce liquidity risk, reduce the size of pricing errors, and generate a higher return

165 Glosten LR, Milgrom PR (1985) p 71.

for small-cap stocks.[166] The participation of a DMM can increase liquidity in call auctions,[167] continuous trading,[168] and IPOs.[169] However, a market maker can sustain losses and needs proper incentives to take the risk.[170]

In continuous trading, incentives can be created by bid-ask spreads that can reduce the market maker's losses.[171] However, it would not be enough to rely on spreads only in the case of small-cap stocks,[172] because large market-based spreads can hamper trading and reduce liquidity. To enhance liquidity in continuous trading, an alternative could therefore be to use a "maximum spread" rule that requires the DMM to keep the bid-ask spread within a specified width in exchange for a periodic payment from the issuer.[173]

In Europe, many European markets introduced electronic continuous limit order systems in the 1980s and 1990s without any market makers to provide liquidity. To increase liquidity, markets introduced DMM programmes with a maximum spread rule and payments by the issuer.[174] The Neuer Markt combined a central order book with liquidity supporting intermediaries ("Betreuer").[175] The Paris Bourse introduced recognised specialists (animateurs).[176]

According to the principle of freedom of contract, it would be legal in Europe for the issuer to agree on maximum spread obligations with a DMM.[177] DMM contracts have been regulated in EU law and exchange rules.[178]

Bid-ask spreads do not exist in call markets with single-price auctions, but there are ways to ensure the participation of market makers even in call markets.[179] This may require payments for market making services. There is a funda-

166 Menkveld AJ, Wang T (2013).
167 Kehr CH, Krahnen JP, Theissen E (2001) p 252.
168 Skjeltorp JA, Odegaard BA (2015).
169 Bessembinder H, Hao J, Zheng K (2015).
170 This is recognised in recital 9 of Delegated Regulation (EU) 2017/578.
171 Glosten LR, Milgrom PR (1985) p 72.
172 Bessembinder H, Hao J, Zheng K (2015); Skjeltorp JA, Odegaard BA (2015) p 242.
173 Bessembinder H, Hao J, Zheng K (2015) p 1998; Skjeltorp JA, Odegaard BA (2015) p 242.
174 Skjeltorp JA, Odegaard BA (2015) p 242; Kehr CH, Krahnen JP, Theissen E (2001) p 252.
175 See Gerke W, Bosch R (1999).
176 Demarchi M, Foucault T (2000).
177 Bessembinder H, Hao J, Zheng K (2015) p 1998 footnote 5; Anand A, Tanggaard C, Weaver DG (2009).
178 See point (b) of Article 2(1) of Delegated Regulation (EU) 2017/578; § 82(2) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020); Rule 4401 of the London Stock Exchange.
179 Kehr CH, Krahnen JP, Theissen E (2001) p 252: "The findings imply that call market trading is a means of reducing execution costs for small orders. Furthermore, the results on specialist participation indicate that the participation of an intermediary in the auction is beneficial.

mental difference in the treatment of paid-for market making services between European and US law.

Theissen and Westheide have described the practices on Germany's Xetra® as follows: "The designated market making arrangement is specified in a contract between the issuer and the market maker. The issuer pays the market making firm a fee. The market making firm, in turn, commits to register as a designated market maker for the issuer's stock … [Designated market makers] are required to submit buy and sell limit orders (referred to as 'quotes' hereafter) to the call auctions and to quote bid and ask prices during the continuous trading session. They have to meet a minimum participation rate in the call auctions and a minimum quotation time in the continuous trading session. For a quote to count towards the minimum participation rate and minimum quotation time requirements, it must satisfy maximum spread and minimum depth requirements … Designated market makers do not have an informational advantage (such as exclusive access to the limit order book, as the NYSE specialists had), and their quotes are subject to the same price and time priority rules as orders submitted by agency and principal traders."[180] The minimum standards for designated market makers are defined in the "Designated Sponsor Guide" published by Deutsche Börse.[181]

Since the DMMs duties on Xetra® cover both auctions and continuous trading, the costs of both activities are covered by income from both activities in this case.

In the US, an issuer must not pay a third party for market making services under Financial Industry Regulatory Authority (FINRA) Rule 5250(a).[182] This different approach is reflected in the Nasdaq Equity Rules that make it clear that a member must not be prevented from setting its own spread.[183]

This has implications for the design of electronic call auctions. Specifically, recent attempts to incorporate intermediaries into electronic call auctions for less liquid stocks, as for example the Betreuer in Frankfurt and the animateur in Paris, are likely to enhance the liquidity of the market."

180 Theissen E, Westheide C (2017).

181 Deutsche Börse AG, Designated Sponsor Guide, Version 12.1, 1 February 2020.

182 FINRA Rule 5250(a): "No member or person associated with a member shall accept any payment or other consideration, directly or indirectly, from an issuer of a security, or any affiliate or promoter thereof, for publishing a quotation, acting as market maker in a security, or submitting an application in connection therewith." Bessembinder H, Hao J, Zheng K (2015) p 1998: "The NYSE and Nasdaq markets have both recently requested partial exemptions from rule 5250, to allow DMM contracts for certain exchange traded funds. Some commentators have criticized these proposals on the grounds that DMM contracts distort market forces."

183 Nasdaq Equity Rule IM-2110 – 5.

In 2013, however, Nasdaq received approval from the SEC to establish a Market Quality Program (MQP) as a pilot programme.[184] MPQ is "a voluntary program designed to promote market quality in certain securities listed on Nasdaq". An MQP Company may list an eligible MQP Security on Nasdaq and, in addition to the standard Nasdaq listing fee, a Sponsor may pay an MQP Fee: "An MQP Fee will be used for the purpose of incentivizing one or more Market Makers in the MQP Security ... to enhance the market quality of the MQP Security."[185] The SEC granted participants in Nasdaq's MQP an exemption from what is now FINRA Rule 5250.[186] This programme thus allows companies to pay financial intermediaries directly for market making services.[187] In 2012, NYSE Arca, Inc. proposed a similar "Lead Market Maker Program," but the proposal was later withdrawn.[188] Both programmes were primarily intended for exchange-traded funds (ETFs) rather than stocks.

Conclusion. It is beneficial to use market makers on thin markets. Small-cap issuers in equity markets could benefit from the use of DMMs. Market makers can be used both in continuous trading and in call markets.[189] Market makers should have an incentive to provide their services. One of the tested alternatives is that the issuer pays the market maker a fee. In continuous trading, market makers may even be able to earn some income from spreads. The use of DMMs can be combined with maximum spread obligations in Europe.

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184 Adopted March 20, 2013 (SR-NASDAQ-2012–137); amended March 19, 2015 (SR-NASDAQ-2015–025); amended June 8, 2017 (SR-NASDAQ-2017–058), amended October 18, 2017 (SR-NASDAQ-2017–111). See Skjeltorp JA, Odegaard BA (2015) p 241.

185 Nasdaq Rule 5950, Preamble: "The Market Quality Program ... is a voluntary program designed to promote market quality in certain securities listed on Nasdaq. An MQP Company may list an eligible MQP Security on Nasdaq and in addition to the standard (non-MQP) Nasdaq listing fee set forth in the Rule 5000 Series (consisting of Rules 5000–5999), a Sponsor may pay a fee ('MQP Fee') in order for the MQP Company, on behalf of an MQP Security, to participate in the Program. An MQP Fee will be used for the purpose of incentivizing one or more Market Makers in the MQP Security ('MQP Market Maker') to enhance the market quality of the MQP Security. Subject to the conditions set forth in this rule, this incentive will be credited ('MQP Credit') to one or more MQP Market Makers that make a quality market in the MQP Security pursuant to the Program."

186 NASD Rule 2460 has been superseded by FINRA Rule 5250.

187 Nasdaq Rule 5950(b)(2).

188 Skjeltorp JA, Odegaard BA (2015) p 241 footnote 2; SEC Release No. 34–66966 (May 11, 2012).

189 Kehr CH, Krahnen JP, Theissen E (2001) p 252.

8.7.4 Excursion: Market Makers in Some Countries

It is customary to use market makers in order to increase liquidity. Market makers are used in many countries.

Market makers in the US. Market makers traditionally have played an important part in US equity markets. After having run a formal daily call auction for listed stocks,[190] the NYSE adopted continuous trading as a means of accommodating large numbers of stocks and traders in a single physical location in the late 1860s.[191] It was complemented by the specialist system of the Open Board outside the NYSE framework. The Open Board was organised by men who for one reason or another had been excluded from the NYSE.[192] In this case, a broker dealt in one stock only and acted as a market maker for buyers and sellers without using the auction method.[193] This made NYSE a market that used middlemen known as "specialists". The specialists have recently been replaced by designated market makers (DMMs).

DMMs used to be important providers of liquidity in the US. Since the advent of Regulation NMS and electronic trading, however, voluntary de facto market makers that have no formal obligations to maintain market quality in their stocks have supplanted DMMs as the primary providers of liquidity:[194] "modern electronic markets rely almost entirely on voluntary liquidity provision, and the markets generally seem to function well".[195]

This said, the NYSE still has DMMs.[196] The NYSE describes DMMs as "the cornerstone of the NYSE market model". The NYSE requires DMMs to maintain a cer-

190 Sobel R (1977) p 28.
191 Domowitz I, Steil B (2002) p 315.
192 Sobel R (1977) p 28.
193 *Ibid.*, p 29.
194 Clark-Joseph AD, Ye M, Zi C (2017) p 652. See Rule 611 of Regulation NMS. For the definition of an "exchange market maker", see Rule 600(b)(24) of Regulation NMS: "Exchange market maker means any member of a national securities exchange that is registered as a specialist or market maker pursuant to the rules of such exchange." For the definition of an "OTC market maker", see Rule 600(b)(52) of Regulation NMS: "OTC market maker means any dealer that holds itself out as being willing to buy from and sell to its customers, or others, in the United States, an NMS stock for its own account on a regular or continuous basis otherwise than on a national securities exchange in amounts of less than block size." For the definition of a "trading center", see Rule 600(b)(78) of Regulation NMS: "Trading center means a national securities exchange or national securities association that operates an SRO trading facility, an alternative trading system, an exchange market maker, an OTC market maker, or any other broker or dealer that executes orders internally by trading as principal or crossing orders as agent."
195 Clark-Joseph AD, Ye M, Zi C (2017) p 652.
196 See *ibid.*, p 652.

tain number of specialists and register a specified amount of capital with the exchange. According to the NYSE, DMMs: have much higher trading obligations than traditional market makers; are core liquidity providers; reduce volatility; improve price discovery at the open and close; and reduce trading costs for investors.[197] DMMs seem to have relatively light obligations.[198]

The Nasdaq Stock Market has market makers.[199] A Nasdaq market maker is required to state a firm bid price and a firm ask price that it is willing to honour. Each security on the Nasdaq generally has more than one market maker.

Market makers in Europe. Designated market makers are used in Europe as well. Their impact on liquidity is recognised in MiFID II.

According to MiFID II, "Member States shall require a regulated market to have in place … schemes to ensure that a sufficient number of investment firms participate in such agreements which require them to post firm quotes at competitive prices with the result of providing liquidity to the market on a regular and predictable basis, where such a requirement is appropriate to the nature and scale of the trading on that regulated market."[200] A regulated market must have in place "written agreements with all investment firms pursuing a market making strategy on the regulated market".[201] The use of market makers is a way to comply with the more general duty of the regulated market to "have in place effective systems, procedures and arrangements to ensure its trading systems are resilient, have sufficient capacity to deal with peak order and message volumes, are able to ensure orderly trading under conditions of severe market stress, are fully tested to ensure such conditions are met and are subject to effective business continuity arrangements to ensure continuity of its services if there is any failure of its trading systems".[202]

There is a Commission Delegated Regulation setting out details.[203] For example, the Commission Delegated Regulation regulates the contents of the market making agreement between the regulated market and an investment firm that

197 DMMs Designated Market Makers. NYSE website.

198 Clark-Joseph AD, Ye M, Zi C (2017) p 652.

199 Nasdaq Stock Market Rule 4612(a): "Quotations and quotation sizes may be entered into the Nasdaq Market Center only by a member registered as a Nasdaq Market Maker or other entity approved by Nasdaq to function in a market-making capacity."

200 Point (b) of Article 48(2) of Directive 2014/65/EU (MiFID II).

201 Point (a) of Article 48(2) of Directive 2014/65/EU (MiFID II).

202 Article 48(1) of Directive 2014/65/EU (MiFID II).

203 Commission Delegated Regulation (EU) 2017/578 of 13 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards specifying the requirements on market making agreements and schemes.

pursues "a market making strategy".[204] The Commission Delegated Regulation even regulates quotes.[205]

In Germany, the earlier Neuer Markt combined a central order book with liquidity supporting intermediaries or "designated sponsors" ("Betreuer"). These designated sponsors were the functional equivalents of Nasdaq maket makers.[206] Designated sponsors nowadays operate only in the Xetra® system.[207] The Frankfurt Stock Exchange (Frankfurter Wertpapierbörse, FWB) distinguishes between Market Makers,[208] Designated Sponsors,[209] and Specialists.[210] The trading models provided by the FWB thus include the Market-Maker Model of Continuous Auction and the Specialist Model of Continuous Auction.[211] Regardless of the model, somebody must act as a quote provider.[212]

204 Article 1(1) of Delegated Regulation (EU) 2017/578.

205 Article 1(2) of Delegated Regulation (EU) 2017/578. See also § 1 of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "… Market Maker Quote. Limited buy and sell orders, that, simultaneously, are entered within the meaning of Article 1 Paragraph 2b) of the Delegated Regulation (EU) 2017/578 …"

206 See Gerke W, Bosch R (1999).

207 See Deutsche Börse AG, Designated Sponsor Guide, Version 12.1, 1 February 2020.

208 § 80(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "Market makers are required to continuously enter binding market maker quotes in at least one security and during 50 % of the quote time on a monthly average …"

209 § 82(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "Designated sponsors shall, in a security for which they have assumed designated sponsoring and which is traded in Continuous Trading with Intra-Day Auctions, continuously supply binding market maker quotes and enter into transactions on such basis; in addition, the Designated Sponsors are obliged to provide binding market maker quotes throughout the auction …"

210 § 85(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "In the Specialist Model of Continuous Auction, companies (Specialists) commissioned by the competent operating institution pursuant to Paragraph 2 accept the duties pursuant to §§ 71, 86 for the securities respectively included in the agreement pursuant to Paragraph 2 Clause 1. Provided this is necessary to maintain an orderly exchange trading the Specialist is, upon request of the operating institution, obliged to assume these duties for additional securities. In case of a change to the Market-Maker Model of Continuous Auction, the duties of the Specialist for the respective securities shall cease to exist; a claim to commissioning for certain securities does not exist."

211 § 102(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "In its application for introduction pursuant to § 58 Paragraph 1, the issuer shall indicate if the trading of the security shall be handled in the Market-Maker Model or Specialist Model. If the prerequisites for introduction in the Market-Maker Model are not fulfilled, the Management Board allows the introduction in the Specialist Model. If none of the prerequisites are fulfilled, it shall refuse the application for introduction."

212 § 103(1) of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020): "Irrespective of the selection of the Model, the issuer shall name a quote provider for

In France, the Paris Bourse introduced particular recognised specialists (animateurs) in the 1990s. There are animation contracts (Registered Dealers Agreements, RDAs) between brokerage firms and Euronext. An animateur, one or more per stock, agrees to quote spreads for the stock on the central orderbook. As compensation, animateurs do not pay trading fees. An animation contract can be complemented by a liquidity agreement with the major shareholders of the company and other financial intermediaries. Under this agreement, the animateur and the other participants in the agreement commit capital in order to sustain the liquidity of the stock in which the animateur makes the market.[213]

Market makers on the LSE. The use of market makers is characteristic of the London Stock Exchange (LSE). In the nineteenth century, there was no limit to LSE membership[214] and many exchange members were "dealers". Such dealers were "by custom required to make a price at which they will buy and another at which they will sell".[215] Clients thus turned to the market maker that provided the best bid-ask quote. Even now, there are official market makers for many securities on the LSE.

When the UK still was in the EU, the LSE operated a market making scheme that had to be aligned with MiFID II.[216] The market making scheme related to shares and ETFs for which there was a "liquid market" as defined in MiFIR[217] and specified in greater detail in a Commission Delegated Regulation.[218]

Conclusion. Since the traditional business model of market makers is based on continuous trading, they would need a new business model for microexchanges that use call auctions.

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the respective security in its application for introduction pursuant to § 58 Paragraph 1. The quote provider shall be admitted at FWB access for trading and shall be responsible for the provision of Indicative and/or Binding Quotes for individual securities or security categories through written declaration vis-à-vis the Management Board. In case of fulfilment of these prerequisites, also the issuer may be quote provider."

213 Demarchi M, Foucault T (2000).

214 Gibson GR (1889) p 29. Membership was limited in France. See *ibid*., p 52.

215 *Ibid*., p 34.

216 Point (b) of Article 48(2) of Directive 2014/65/EU (MiFID II); Rules 4400 to 4412 of the Rules of the London Stock Exchange.

217 Point (17) of Article 2(1) of Regulation (EU) 600/2014 (MiFIR).

218 Chapter I of Delegated Regulation (EU) 2017/567.

8.7.5 Block Trading

Block size may cause liquidity problems when the block is too large (in relation to normal turnover) or too small (in relation to lot size). In practice, liquidity faces a hard test when parties want to trade in large blocks of shares.

To name a historical example, blocks revealed the flaws in the specialist system of the NYSE.[219] When European investors and governments attempted to sell shares in American corporations in New York after the beginning of the Second World War, it was difficult for NYSE specialists to execute sales of large blocks.[220] As institutional interest grew in the 1950s, this market gap was filled by OTC dealers: "On learning of the existence of a person with a large block of stock to dispose of, the dealer would try to line up customers to acquire it ... Once everything was in place, the dealer would contact the seller, make an offer, and then distribute the block to the purchasers, selling at a higher price than he purchased."[221] In the 1950s and 1960s, institutional investors came to dominate trading in many key issues. The NYSE sought new techniques to enable specialists to adapt to block trading, but failed.[222]

Order types. Exchange rules tend to permit the use of different kinds of orders in order to improve liquidity.

For example, the Exchange Rules for the Frankfurter Wertpapierbörse (FWB) provide for "Iceberg Orders", "Limit Orders (limited orders)", "Market Orders (unlimited orders)", "One-Cancels-Other Orders", "Orders-On-Event", "Persistent Orders", "Stop-Limit Orders", "Stop-Market Orders", "Stop Orders", "Stop Limit Orders or Stop Market Orders", "Stop-Market Orders with a specified dynamic Stop Limit", "Trailing Stop Orders", and "Volume Discovery Orders".[223]

In the US, LTSE described its order types in its 2019 SEC filing as follows: "Users may submit orders to the Exchange as Limit Orders or Market Orders, with the following order parameters: Displayed; Reserve; Non-Displayed; Odd Lot; Mixed Lot; LTSE Only; Minimum Quantity; and Inter-market Sweep. Orders may be submitted with the following time-in-force instructions: Immediate-or-Cancel; Day; Good 'til Extended Day; System Session; and Good 'til Time. Users may submit orders with the display instructions of Displayed, Non-Displayed, or Reserve, but orders submitted without display instructions will be fully displayed. Displayed orders will be displayed on an anonymous basis at

219 Sobel R (1977) p 222.
220 *Ibid*., pp 72–73.
221 *Ibid*., pp 72–73.
222 *Ibid*., p 54.
223 § 1 of Exchange Rules for the Frankfurter Wertpapierbörse (FWB) (as of 27 January 2020).

a specified price. Orders will be classified as a Round Lot, Odd Lot, or Mixed Lot. Users may also choose to designate orders with an Anti-Internalization Group Identifier modifier for anti-internalization purposes to prevent executions against resting opposite side orders originating from the same market participant identifier."[224]

According to LTSE, "[a]ll of these order types and parameters are similar to order types and parameters approved by the Commission and currently available on other national securities exchanges".[225] LTSE said that it would operate "a fully automated electronic order book" in a system that would "continuously and automatically match orders pursuant to price/display/time priority, with displayed orders and displayed portions of orders having precedence over non-displayed orders and non-displayed portions of orders at the same price without regard to time."[226]

Order types on a microexchange. One may ask to what extent the legal framework of the proposed microexchange should permit different kinds of order types. We propose limiting order types to the minimum.

It is particularly challenging to trade in large blocks of small-cap stocks. For the proposed microexchanges, the liquidity of large blocks raises certain fundamental questions relating to the interests of the firm and corporate governance. While retail investors (buyers or sellers of small blocks) tend to face smaller liquidity problems under normal trading circumstances, institutional investors (buyers or sellers of large blocks) can face bigger liquidity problems. What kinds of shareholders would the issuer-firm prefer to have?

The purpose of this book is to find ways to increase retail investors' direct equity investments and to increase the number of companies with publicly-traded shares. On one hand, focusing on retail investors only could help to simplify transactions. On the other, the absence of rules facilitating block trading and more complex order types might block institutional investors.

At the end of the day, block traders and other institutional investors already have a chance to invest directly in stocks traded on various kinds of other venues. Retail investors have too little choice. Moreover, there can be firms that prefer to manage their share ownership structure and corporate governance by making it more difficult for short-term institutional investors to trade in the company's shares. A regime that focuses on retail investors might provide a new alternative for firms, increase the number of companies with publicly-traded

224 SEC Release No. 34 – 85828 (May 10, 2019), III.C.
225 *Ibid.*
226 *Ibid.*

shares, and increase competition between different trading regimes. OTC dealers can work as a backup regime for block trading. For these reasons, keeping the number of order types low looks better for the proposed microexchange.

The practices of Wiener Börse indicate what the necessary order types could be. The Vienna Stock Exchange's Trading Rules for the Automated Trading System Xetra®[227] facilitate three trading procedures: (1) auction; (2) continuous trading; and (3) continuous auction.[228] The Trading Rules lay down the process for auction trading. For auction trading, orders are market orders or limit orders: "In auction trading, all market orders and limit orders received up to a certain point in time are used to determine the price at which the largest volume of orders can be executed with the lowest number of surplus orders remaining; market orders shall have priority."[229]

8.8 Allocation of Costs

Generally, "capital to support liquidity, sales and equity research may be essential to sustain active markets" for small-cap stocks.[230] Somebody should cover the costs for the use of the proposed microexchange.

Traditional exchanges may use multiple revenue sources such as regulatory fees, transaction fees, listing fees, market data fees, and other fees.[231] The introduction of automated auction trading changed the nature of fees in the history of exchanges by making fixed membership fees untenable and transaction-based charging the main rule.[232]

The proposed microexchange must be different because of the number of issuers (one per exchange) and the limited resources of the nominal owner of the marketplace (a wholly-owned SPV of the issuer).

There are five basic alternatives. The first is a percentage amount to be paid by traders, but this alternative might hamper trading in large quantities. The second is a fixed fee to be paid by traders, but this alternative might hamper trading in small quantities. The third alternative is to provide trading on a microex-

227 Wiener Börse, Special General Terms and Conditions of Business (Special Terms) of the Vienna Stock Exchange in its Function as Securities Exchange, 2.1 Trading Rules for the Trading System Xetra® (Exchange Electronic Trading) (18 November 2019).
228 *Ibid.*, § 4(1).
229 *Ibid.*, § 4(2).
230 OECD (2015c) p 130, citing Weild D, Kim E, Newport L (2013) and Oliver Wyman (2014).
231 Aggarwal R, Ferrell A, Katz J (2007); Fleckner AM (2006) pp 2549–2550.
232 Steil B (2002a).

change free of charge for traders. This alternative would increase trading and liquidity, but the costs would still have to be covered one way or another. The fourth alternative is allocating trading costs to the issuer and/or an external service provider. Finally, costs can to some extent be socialised.

Costs can be allocated in new and innovative ways where the microexchange technology is based on a digital platform that the issuer-firm uses as a service through its SPV. In this case, the question of the number of issuers per exchange is replaced by the question of the number of microexchanges and traders (users) per technology platform.

Trading costs could then be covered in different ways. Part of the trading costs could be recovered in the form of fees from traders. Part of the costs could be allocated to the issuer as operational costs and, indirectly, socialised between all shareholders. Part of the costs could be allocated to an external service provider responsible for the platform.

Part of the necessary "capital to support liquidity, sales and equity research" could thus come from external service providers. This would not be unheard of in digital economy. In digital economy, providers of online services can choose between various revenue models to cover costs.[233] For example, LTSE sells services according to The Economist, a newspaper: "Instead of charging for transactions or data, as most stock exchanges do ... it will charge for add-ons that appeal to startups ... such as software enabling them to track ... shareholders ..."[234] At the end of day, the most important asset in digital economy is user information. It can be monetised in many ways.

In the future, the socialisation of costs may depend on the design of central bank digital currencies and the provision of additional central bank services. For example, the policy of the Eurosystem is that the "provision of additional services should be left to supervised intermediaries".[235] Such additional services could relate to the holding of funds and settlement.[236]

The question of costs raises the question of lot size. When transaction costs were higher in the past, a bigger unit of trading (lot) was regarded as a way to reduce costs. This reduced costs for orders that matched the size of the unit of trading (round lots), but there was a problem with orders for smaller quantities (odd lots). You needed a mechanism to deal with such lots. For example, there used to be odd-lot dealers and odd-lot houses on the NYSE.[237] The odd-lot dealer

233 See, for example, OECD (2014).
234 The Economist, NOIPO? 16 May 2019.
235 ECB (2020) p 20.
236 Bech M, Hancock J, Rice T, Wadsworth A (2020).
237 Hardy CO (1939/1975) pp 1 and 10.

system on the NYSE was regarded as efficient.[238] Transaction costs have now been brought down by digitalisation. It is easier to use smaller units of trading. There are no problems with odd lots if the unit of trading is one share.[239]

8.9 Outsourcing

8.9.1 General Remarks

A stock exchange is a complex organisation with many functions (section 3.3.2).[240] The functions must be organised one way or another. While trading is regarded as "a commodity [and] a standard process",[241] the organisation of trading consists of complex activities and is not a commodity. For this reason, microexchanges will not come into existence without the outsourcing of many regulated activities.

One can broadly distinguish between pre-trading activities, trading activities, and post-trading activities. Such activities can include central counterparty functions and clearing services as well as settlement and custody services.[242] For the exchange to work, you need both trading infrastructures and post-trading infrastructures.[243]

In a bit greater detail, one can also distinguish between the activities of: dissemination of pre-trade information and post-trade information;[244] bringing together parties that want to participate in trading;[245] price discovery;[246] matching

238 *Ibid.*, pp 129 – 130.

239 *Ibid.*, p 132.

240 Mues J (1999) pp 29 – 30; Baum H (2002) p 106: "Typical exchange services are: dissemination of pre-trade information, order routing, price determination, matching and confirmation, reporting and documentation, dissemination of post-trade information, clearing and settlement ..."

241 Macey JR, O'Hara M (2005) p 564.

242 See, for example, European Code of Conduct for Clearing and Settlement of 7 November 2006.

243 See Ferrarini G, Saguato P (2014) p 19.

244 See recital 53 and Article 65 of Directive 2014/65/EU (MiFID II).

245 See point (19) of Article 4(1) of Directive 2014/65/EU (MiFID II) defining a "multilateral system".

246 Baum H (2002) p 106 on alternative trading systems (ATS): "As a rule, the securities traded here are principally traded on securities exchanges or other organized markets. Some ATSs have price discovery functions; other serve as matching systems using only prices already established on organized markets."

of bids (order routing, price determination, matching, confirmation);[247] acting as a central counterparty;[248] clearing and settlement;[249] and reporting and documentation.[250]

When organised, these activities are the component parts of various kinds of services that benefit many kinds of market participants.[251] For example, a stock exchange can provide signalling services for the benefit of issuers.[252]

Generally, the core functions that must be organised to make a stock exchange work would include at least the following functions:

- overall responsibility for the exchange as well as its organisation, management, rule-making, and regulatory compliance;[253]
- holding of regulatory permits and authorisations;[254]
- admission of traders and issuers;
- pre- and post-trade disclosures;
- the matching of bids;
- price determination;
- counterparty or central counterparty services;
- clearing;
- settlement;
- holding of assets and collateral;
- payment services;

247 See *ibid.*, p 106.

248 See point (1) of Article 2 of Regulation 648/2012 (EMIR) defining a "CCP".

249 See point (3) of Article 2 of Regulation 648/2012 (EMIR) defining "clearing".

250 See point (2) of Article 2 of Regulation 648/2012 (EMIR) defining a "trade repository".

251 Compare Macey JR, Kanda H (1990) pp 1009–1010: "We show that the product offered by organized securities exchanges, which is called a 'listing,' can be unbundled into four component parts. Specifically, organized exchanges provide listing companies with: (1) liquidity, (2) monitoring of exchange trading, (3) standard form, off-the-rack rules to reduce transactions costs, and (4) a signalling function that serves to inform investors that the issuing companies' stock is of high quality."

252 *Ibid.*, pp 1023–1024 on signalling: "Listing on an exchange can provide a valuable filter to investors, informing them that the securities listed are of high quality. This signalling service is valuable to issuers as well as investors. Issuers find it costly to make credible assurances to potential investors that their securities are of high quality. An exchange listing provides an independent verification of quality ... Consistent with this analysis, exchanges require that listed firms meet certain listing standards."

253 See, for example, Article 16(5) and point (b) of Article 40 of Directive 2014/65/EU (MiFID II) on outsourcing; recital 62 of Regulation 648/2012/EU (EMIR) on outsourcing by a CCP; Article 30(1) of Regulation 909/2014 (CSD Regulation) on the outsourcing of securities settlement services.

254 See, for example, Articles 5(1), 5(2) and 33(1) of Directive 2014/65/EU (MiFID II).

- keeping a register of shareholders;
- the filing of changes in share ownership with the register; and
- monitoring and supervision.

It is customary for the operators of exchanges to outsource many functions.[255] For the operator of the exchange, the allocation of functions would be a question of "make or buy". There are functions that the operator will produce internally ("make"), and functions that the operator will outsource to external service providers ("buy"). To some extent, the allocation of functions is a question of regulatory compliance. It is also a question of the management of costs and risks.

The same functions must be regulated and organised for the proposed microexchange. The party responsible for these functions faces increased regulatory compliance obligations and costs.[256] To increase the number of microexchanges, many or most of these functions should be outsourced to specialist firms or modified.

Facilitating the operation of a microexchange might thus increase demand for new kinds of outsourced services. Outsourcing could create positive network effects and new economies of scale at the platform level.[257]

In the following, we will have a look at some of the core exchange functions: rule-making, central counterparty functions, clearing, market making, and the holding of customer assets and collateral.

8.9.2 Rule-Making

The legal framework of a traditional exchange customarily consists of internal self-regulation, external regulation by other network companies that participate in the operations of the exchange, and external regulation by the state. If a com-

255 See CESR and European Central Bank, Standards for Securities Clearing and Settlement in the European Union, September 2004 Report, Standard 11: Operational reliability. See also Article 16(5) and point (b) of Article 40 of Directive 2014/65/EU (MiFID II); recital 62 of Regulation 648/2012/EU (EMIR); Article 30(1) of Regulation 909/2014 (CSD Regulation).

256 Such as an "investment firm" defined in point (1) of Article 4(1) of Directive 2014/65/EU (MiFID II).

257 In contrast, there has been a problem of free-riding in the past. Macey JR, O'Hara M (2005) p 576: "As with other public goods, the regulatory activities conducted by the NYSE and other exchanges are subject to significant free-rider problems … Since the NYSE and other exchanges cannot exclude rival companies from the benefits stemming from the exchanges' regulatory expenditures, they will likely underproduce regulation."

pany may operate its own marketplace, one may ask who will make the rules of the marketplace.

Generally, if there is only one traditional stock exchange in the country, it is relatively easy to let the exchange operator make much of the rules.[258] Market participants are likely to learn the rules of a country's sole stock exchange regardless of who makes them. The more stock exchanges there are, the more expensive it gets for market participants to keep track of the rules of each stock exchange, and the more you need legislation common to all stock exchanges. In the latter case, you need legislation to increase the transparency of the legal framework, to prevent a race to the bottom, to prevent abuses, and to ensure that there is a level playing field when it is a regulatory objective.[259] Transaction costs are then reduced by mandatory provisions of law rather than through self-regulation. With more profit-driven stock exchanges competing for the same business, you also need an external body to monitor compliance and to punish for non-compliance. The allocation of the function of rule-making can thus influence transparency, risks, transaction costs, and the success of stock exchanges as a form or organised trading.

To facilitate the development of microexchanges, it would be necessary to standardise the legal framework for these marketplaces by adopting mandatory provisions of law that lay down the rules for all such marketplaces in the jurisdiction with a high level of cross-border harmonisation.

Microexchanges would not work without extensive standardisation. First, regulatory standardisation would make it easier for external service providers to scale up (develop service products or software for microexchanges, sell each product to many microexchanges, reach benefits of scale, and develop better products for microexchanges). Second, it would make it easier for service providers to develop products that enable retail investors to see, with the same user interface and with the same user experience, many alternative stocks traded on different microexchanges. Third, it would make it easier for service providers to develop new business models and revenue models to cover the costs of the microexchange. Moreover, state rule-making would facilitate monitoring and enforcement by state authorities.

258 See, for example, the role of the Compagnie des agents de change in the management of the nineteenth-century Paris Bourse in Walker DA (2001).

259 See, for example, Section 7 of the Securities Acts Amendments of 1975 in the US; recitals 13–14 of Directive 2014/65/EU (MiFID II).

8.9.3 Choice of Operator and Legal Entity

Firms need legal entities to organise their business. For example, there can be a holding company for group-level centralisation, subsidiaries for the firm's different divisions, and subsidiaries for the organisation of business in different countries. In major financial transactions, it is customary to use special purpose vehicles (SPVs) or other legal entities to ring-fence assets and manage risk. The existence of group-level concentration has been recognised as corporate practice in securities law.[260]

One of the fundamental questions for the proposed microexchange, therefore, is to what extent it should be permissible to use different legal entities for the various functions. Moreover, when organising a microexchange, one may ask whether each group company should have its own marketplace or whether the group should be able to share the same marketplace operated by a group company. Obviously, there would be greater economies of scale if many companies in the same group shared the same marketplace.

There are four alternatives when the firm operates a marketplace internally as is proposed in this Chapter. The first is vertical integration. In this case, the issuer acts as the operator of the marketplace. The second is group integration meaning that the issuer acts as the operator of the marketplace but may provide its services to another company that belongs to the same group. The shares of two or more group companies would then be traded on the same microexchange. The third alternative would be an SPV for trading in the shares of one legal entity. The fourth is an SPV for trading in the shares of two or more group companies.

Now, the purpose of the microexchange is to facilitate secondary trading in the shares of rather small growth firms. To reduce costs, the microexchange should be kept as simple as possible. This might perhaps be achieved when the microexchange is limited to trading in the shares of one company only and the microexchange is owned by an SPV that is a subsidiary of the issuer.[261] The use of an SPV would make it easier to ring-face assets, use a central counterparty, and outsource functions.

260 See, for example, point (b) of Article 2(1) of Directive 2014/65/EU (MiFID II).
261 SPVs are sometimes used in European crowdfunding for pooling. See Hornuf L, Klöhn L, Schilling T (2018) pp 518–519: "Sometimes platforms make use of indirect financing structures in which a special purpose vehicle (SPV) functions as an intermediary for matching investments with the given start-up."

In the EU, MiFID II would need to be amended to facilitate the operation of such SPVs. MiFID II in its current form requires an authorisation for trading venues or the operation of a trading venue.[262] According to current EU preferences, "systematic internalisers" must not become the functional equivalents of trading venues.[263]

8.9.4 Central Counterparty and Clearing

The use of an external central counterparty can reduce traders' risk exposure.[264] Generally, the regulatory trend is to make central counterparties and clearing mandatory for all standardised trading to reduce risk for market participants.[265] The proposed microexchange is a form of standardised trading.

Central counterparty. There are at least three ways to organise the central counterparty function in the particular context of microexchanges. First, the CCP function could be allocated to the issuer itself. Second, it could be allocated to the special-purpose vehicle (SPV) that is the nominal owner of the microexchange. Third, the firm could outsource the CCP function to a specialised service provider.

Allocating the CCP function to the issuer itself would not be legally feasible in the EU. In addition to the strict regulation of the CCP function, the issuer would not be able to comply with legal rules on the acquisition of own shares, the ownership of own shares, the sale of own shares, and financial assistance relating to the purchase of the company's shares:

- Acquisition of own shares. Where the company is the central counterparty for traders that buy and sell its shares, the company buys its own shares. The acquisition of own shares is restricted for public limited-liability compa-

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262 Article 5 of Directive 2014/65/EU (MiFID II).

263 Recital 19 and Article 12 of Regulation (EU) 2017/565.

264 Ferrarini G, Saguato P (2014) pp 19 – 20: "Each post-trading service is aimed at reducing or more generally managing a separate aspect of systemic risk. A CCP interposes between counterparties becoming the 'seller to every buyer and the buyer to every seller'. By netting the opposite positions of its members, a CCP mitigates the overall counterparty credit risk, creates more effective mechanisms to assess potential default risk of its members, and ultimately contributes to the reduction of systemic risk."

265 See Walker DA (2001) p 189 on the collective responsibility of agents on the nineteenth-century Paris Bourse. For the increased use of CCPs, see recital 5 of Regulation 648/2012/EU (EMIR) on the 2009 Pittsburgh agreement as well as Article 4(1) of Regulation 648/2012/EU (EMIR) on the clearing obligation for certain OTC derivatives.

nies in the EU.[266] It is restricted even for SCEs.[267] Under this model, the provisions on the acquisition of own shares would need to leave room for the operation of a marketplace as a central counterparty. The price determined by the matching mechanism should then need to be accepted as the fair price of shares for these purposes.

- Ownership of own shares. Restrictions on the acquisition of own shares are complemented by restrictions on the ownership of own shares. While these restrictions would need to leave room for the operation of a marketplace as a central counterparty, you would still need restrictions on the amount of share capital or shares that the company at any point in time may hold on its books and the period of time that the company may hold its own shares on its books.[268] Moreover, the company should be prevented from using any voting rights attached to shares that it owns.[269]
- Sale of own shares. Where the company is the central counterparty for traders that buy and sell its shares, the company sells its own shares. The sale of existing shares customarily does not need to fall within the scope of pre-emptive rights of existing shareholders.[270] Where it does under national law, these provisions of company law should leave room for the operation of a marketplace as a central counterparty.
- Financial assistance. If the company is the central counterparty and parties do not settle transactions at the point in time when bids are matched, there is a question of so-called financial assistance. Provisions of company law restricting financial assistance[271] would need to leave room for the operation of a marketplace as a central counterparty.

266 Recitals 40 – 41 and Articles 60 – 61 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law). See also Article 63(2) on disclosures in the annual report.
267 Article 4(12) of Regulation 1435/2003 (Regulation on the Statute for a European Cooperative Society).
268 Article 62 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law): "Shares acquired in contravention of Articles 60 and 61 shall be disposed of within one year of their acquisition. If they are not disposed of within that period, Article 61(3) shall apply."
269 Article 63(1) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).
270 Article 72(1) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law): "Whenever the capital is increased by consideration in cash, the shares shall be offered on a pre-emptive basis to shareholders in proportion to the capital represented by their shares."
271 Article 64 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

Since allocating the CCP function to the issuer would be difficult already in the light of company law, there must be a more feasible alternative. The use of an SPV as central counterparty could help to ring-fence the rights and obligations of the central counterparty from the rights and obligations of the issuer. However, it would in practice not work under the existing regulatory model. Because of the extensive regulation of central counterparties, counterparty-SPVs would need to be exempted from a very large regulatory framework. In any case, this alternative should be explored in order to reduce costs.

The outsourcing of the CCP function to a specialised service provider would create economies of scale and reduce costs. It would solve the problem of regulatory compliance and facilitate further outsourcing.[272] At the same time, traders would benefit from a reduction in counterparty risk. This said, the concentration of CCP functions can increase the complexity of the legal framework and costs to users of the CCP service.

The choice of the central counterparty and operator design influences much of the legal framework. In the EU, CCPs can fall within the scope of EMIR and MiFID II.[273] A CCP is an "investment firm" under MiFID II, because this notion is a broad one and "trading on own account" is regarded as an investment service.[274] Moreover, the provision of clearing services as a CCP requires an authorisation and compliance with minimum capital requirements under EMIR.[275] There are collateral (margin) requirements[276] and provisions on a default fund.[277]

This said, crowdfunding is fostered by an exemption from MiFID II. A crowdfunding service provider under the ECSP Regulation cannot be authorised under MiFID II.[278] A crowdfunding service provider nevertheless needs a MiFID II au-

272 Recital 62 of Regulation 648/2012/EU (EMIR): "A CCP may outsource functions. The CCP's risk committee should advise on such outsourcing. Major activities linked to risk management should not be outsourced unless this is approved by the competent authority."

273 See Ferrarini G, Saguato P (2014) pp 22–25.

274 Point (1) of Article 4(1) of Directive 2014/65/EU (MiFID II).

275 Article 14(1) of Regulation 648/2012/EU (EMIR): "Where a legal person established in the Union intends to provide clearing services as a CCP, it shall apply for authorisation to the competent authority of the Member State where it is established (the CCP's competent authority), in accordance with the procedure set out in Article 17." Article 17(1) of Regulation 648/2012/EU (EMIR): "A CCP shall have a permanent and available initial capital of at least EUR 7,5 million to be authorised pursuant to Article 14."

276 Article 41 of Regulation 648/2012/EU (EMIR).

277 Article 42 of Regulation 648/2012/EU (EMIR).

278 Recital 9 of Regulation (EU) 2020/1503 (ECSP Regulation).

thorisation if it wants to provide any discretionary or non-discretionary matching of buying and selling interest.[279]

Margins. A CCP needs margins and access to liquidity resources (cash). Margins are "the primary line of defence for a CCP".[280] A CCP also needs access to adequate liquidity resources: "Access to adequate liquidity resources is essential for a CCP."[281]

However, margin requirements increase costs. To facilitate the operation of microexchanges that are very small-scale trading venues, costs would need to be kept very low. In a decentralised trading system that consists of many microexchanges designed for retail investors, systemic risks are low.

This should be reflected in the scope of exemptions and duties under MiFID II, and taken into account in the collateral requirements.[282] It should be made easy for firms and traders to use a central counterparty. There should be a low-cost CCP for microexchanges. Moreover, the SPV should be available as an alternative to organise the CCP function.

Clearing. Transaction costs customarily are reduced by using a clearing house for clearing and settlement. Clearing houses were common practice already in the nineteenth century.[283] In principle, clearing and central counterparty

279 Recital 35 of Regulation (EU) 2020/1503 (ECSP Regulation): "Crowdfunding service providers should not be able to provide any discretionary or non-discretionary matching of buying and selling interest, because that activity requires an authorisation as an investment firm in accordance with Article 5 of Directive 2014/65/EU, or as a regulated market in accordance with Article 44 of that Directive. Crowdfunding service providers should, in the interest of transparency and flow of information, be able to allow investors who have made investments through their platform to contact, and transact with, each other over their platforms in relation to investments originally made on their platform. Crowdfunding service provider should however inform their clients that they does not operate a trading system and that any buying and selling activity on their platforms is at the client's discretion and responsibility."

280 Recital 70 of Regulation 648/2012/EU (EMIR).

281 Recital 71 of Regulation 648/2012/EU (EMIR).

282 See Article 46(1) of Regulation 648/2012/EU (EMIR): "A CCP shall accept highly liquid collateral with minimal credit and market risk to cover its initial and ongoing exposure to its clearing members. For non-financial counterparties, a CCP may accept bank guarantees, taking such guarantees into account when calculating its exposure to a bank that is a clearing member. It shall apply adequate haircuts to asset values that reflect the potential for their value to decline over the interval between their last revaluation and the time by which they can reasonably be assumed to be liquidated. It shall take into account the liquidity risk following the default of a market participant and the concentration risk on certain assets that may result in establishing the acceptable collateral and the relevant haircuts."

283 Gibson GR (1889) pp 39–42.

functions can be either combined or separated.[284] To reach economies of scale and reduce the costs of regulatory compliance, they can be combined. To facilitate the development of microexchanges, it would again be necessary to ask whether these functions should be combined or separated.

Conclusion. It should be made possible to allocate the central counterparty function as well as clearing and settlement functions to specialised service providers that can take care of regulatory compliance obligations more efficiently thanks to their much larger size. Low systemic risk should be reflected in exemptions and the use of a lighter regulatory regime. To reduce costs, it should be explored how the SPV could take care of these functions. Moreover, in the future, the organisation of such functions could depend on the design of central bank digital currencies and ancillary central bank services.

8.9.5 Settlement, Depositories and the Holding of Investor Funds

Trades must be settled. It is necessary to organise a depositary function for shares and the holding of money that belongs to investors.[285] While it is necessary to keep both shares and money safe and ensure settlement, it is also necessary to keep costs low. The holding of investor funds tends to be combined with higher regulatory compliance obligations and higher costs.

There are three main alternatives. First, the depositary function can be allocated to central securities depositories (CSDs).[286] CSDs are part of the general se-

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284 See, for example, CESR and European Central Bank, Standards for Securities Clearing and Settlement in the European Union, September 2004 Report, Standard 11: Operational reliability (on outsourcing) and recital 62 of Regulation 648/2012/EU (EMIR): "A CCP may outsource functions. The CCP's risk committee should advise on such outsourcing. Major activities linked to risk management should not be outsourced unless this is approved by the competent authority." Article 2 of Regulation 648/2012 (EMIR): "For the purposes of this Regulation, the following definitions shall apply: (1) 'CCP' means a legal person that interposes itself between the counterparties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer; (2) 'trade repository' means a legal person that centrally collects and maintains the records of derivatives; (3) 'clearing' means the process of establishing positions, including the calculation of net obligations, and ensuring that financial instruments, cash, or both, are available to secure the exposures arising from those positions; ..."

285 For an ancient example, see Vidal E (1910) p 19 on French law after the revolution: "Thus it was that the broker was enjoined to have in his hands at the moment of the trade both the securities of the seller and the money of the buyer. (Art. 13 of the decree of 27 Prairial, year X.)"

286 Ferrarini G, Saguato P (2014) pp 19–20: "A CSD traditionally operates in the settlement phase of cash transactions, by holding the securities of listed entities – either in certificate form or dematerialized – and managing the transfer of the same from the seller to the buyer;

curities settlement regime in the EU. The second alternative is to allocate it to an entity that is subject to mandatory professional registration and code of conduct rules. There is a lighter repository regime for certain alternative investment funds (AIFs) in the EU. In the future, the third alternative could be tokenisation and the use of a central bank digital currency (digital euro) and ancillary central bank services. We can have a look at the three alternatives.

Lighter depositary regime for certain AIFs in the EU. AIFs can in some cases use a lighter depositary regime under the Alternative Investment Fund Managers Directive (AIFMD).[287] The lighter depositary regime "takes account of current practice for certain types of closed-ended funds" and permits "Member States ... to allow a notary, a lawyer, a registrar or another entity to be appointed to carry out depositary functions." In such cases, "the depositary functions should be part of professional or business activities in respect of which the appointed entity is subject to mandatory professional registration recognised by law or to legal or regulatory provisions or rules of professional conduct and can provide sufficient financial and professional guarantees to enable it to perform effectively the relevant depositary functions and meet the commitments inherent in those functions."[288]

However, this alternative is only available to certain kinds of AIFs: "... AIFs that have no redemption rights exercisable during the period of 5 years from the date of the initial investments and that, in accordance with their core investment policy, generally do not invest in assets that must be held in custody in accordance with this Directive or generally invest in issuers or non-listed companies in order potentially to acquire control over such companies in accordance with this Directive, such as private equity, venture capital funds and real estate funds ..."[289]

In other cases, AIFs must use a more regulated depositary regime: "[F]or all other AIFs, the depositary should be a credit institution, an investment firm or another entity permitted under Directive 2009/65/EC, given the importance of the custody function. For non-EU AIFs only, it should also be possible for the de-

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a new and growing function of CSDs relates to the management and transfer of collateral. A CSD plays an important role in containing the operational risk of securities markets (CSDs are not active in the derivatives market)."

287 Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010. The Commission is empowered to adopt delegated acts. See Article 56 and recital 78.

288 Recital 34 of Directive 2011/61/EU (AIFMD).

289 *Ibid.*

positary to be a credit institution or any other entity of the same nature as the entities referred to [above] as long as it is subject to effective prudential regulation and supervision which have the same effect as Union law and are effectively enforced."[290]

General securities settlement regime in the EU. In the EU, the general securities settlement regime is based on the CSD Regulation[291] that regulates central securities depositories (CSDs).

The CSD Regulation sums up the importance of central securities depositories in its first and second recitals: "Central securities depositories (CSDs), together with central counterparties (CCPs) contribute to a large degree in maintaining post-trade infrastructures that safeguard financial markets and give market participants confidence that securities transactions are executed properly and in a timely manner, including during periods of extreme stress."[292] "Due to their key position in the settlement process, the securities settlement systems operated by CSDs are of a systemic importance for the functioning of securities markets. Playing an important role in the securities holding systems through which their participants report the securities holdings of investors, the securities settlement systems operated by CSDs also serve as an essential tool to control the integrity of an issue, hindering the undue creation or reduction of issued securities, and thereby play an important role in maintaining investor confidence. Moreover, securities settlement systems operated by CSDs are closely involved in securing collateral for monetary policy operations as well as in securing collateral between credit institutions and are, therefore, important actors in the collateralisation process."[293]

The CSD Regulation "lays down uniform requirements for the settlement of financial instruments in the Union and rules on the organisation and conduct of central securities depositories (CSDs) to promote safe, efficient and smooth settlement".[294]

The main rule is that securities transactions must be recorded in book-entry form in a CSD "[w]here a transaction in transferable securities takes place on a trading venue the relevant securities shall be recorded in book-entry form in a

290 *Ibid.*

291 Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012.

292 Recital 1 of Regulation 909/2014 (CSD Regulation).

293 Recital 2 of Regulation 909/2014 (CSD Regulation).

294 Article 1(1) of Regulation 909/2014 (CSD Regulation).

CSD on or before the intended settlement".[295] A "trading venue" has been defined in MiFID II and means "a regulated market, an MTF or an OTF".[296]

The CSD Regulation lays down an authorisation requirement: "Any legal person that falls within the definition of CSD shall obtain an authorisation from the competent authority of the Member State where it is established before commencing its activities."[297] The CSD Regulation even addresses settlement internalisers.[298]

Tokenisation and central bank digital currency. The clearing and settlement landscape might change in the future: "Today, securities such as equities and bonds are maintained in electronic book-entry accounts at centralised securities depositories. In the future, they could 'live' on distributed ledgers held across a network of traders where each has a synchronised copy."[299]

Stocks could thus live on distributed ledgers as tokens. Tokenisation may have implications for the role of intermediaries in securities clearing and settlement. Securities could be settled by transferring account-based securities in exchange for cash tokens or transferring security tokens in exchange for cash in accounts.[300]

Where central bank digital currency means that the central bank grants accounts to individuals, payments can be settled on the central bank's balance sheet. The central bank is the ultimate provider of sufficient settlement liquidity.[301]

Combining the tokenisation of securities and central bank digital currency accounts, it could be possible to settle transactions that consist of the transfer of shares and the payment of the price immediately (cash against delivery, Zug-um-Zug). Transactions could be supported by trusted technology to enable the pre-funding of the purchase with an amount of digital currency deducted from the buyer's balance before the transaction is closed and settled.[302]

Conclusion. It should be made possible to allocate the depositary function and the holding of investors' money to specialised service providers that can

295 Article 3(2) of Regulation 909/2014 (CSD Regulation).
296 Point (42) of Article 2(1) of Regulation 909/2014 (CSD Regulation).
297 Article 16(1) of Regulation 909/2014 (CSD Regulation).
298 Article 9 of Regulation 909/2014 (CSD Regulation). See also point (11) of Article 2(1) of Regulation 909/2014 (CSD Regulation) on the definition of a "settlement internaliser".
299 Bech M, Hancock J, Rice T, Wadsworth A (2020) p 67.
300 *Ibid.*, p 77.
301 BIS Annual Economic Report 2021, III. CBDCs: an opportunity for the monetary system, p 70.
302 Generally on the digital euro, see ECB (2020).

take care of regulatory compliance obligations more efficiently. In the EU, AIFMD can be used as a model. The tokenisation of securities and the introduction of the digital euro may have a disruptive effect on settlement.

8.9.6 Conclusions

The nominal owner of the marketplace should be an SPV that is a wholly-owned subsidiary of the issuer. Regulatory compliance obligations should be reduced through exemptions in order to enable the issuer to operate the microexchange through its SPV. Because of the small size of each microexchange, the development of microexchanges cannot be facilitated without permitting the extensive outsourcing of exchange functions. It should be made possible for the issuer (through its SPV) to turn to online platforms for the organisation of trading on the exchange. It should be permitted to buy central counterparty functions, clearing and settlement functions, depositary functions, and the holding of investor funds from specialised service providers.

8.10 Exemptions

To facilitate the development of microexchanges, it would be necessary to create room for the proposed new regulatory regime in securities and company law. The proposed microexchange would need exemptions from the existing regulatory regime.

If the issuer organised the operation of the microexchange internally under the "make" model it would need very extensive exemptions indeed. Under EU securities law, it would need an exemption from the regulation of trading venues, central counterparties, clearing houses, and settlement systems, and from the regulation of investment services. It would be necessary to clarify certain company law provisions relating to the acquisition, ownership, and sale of own shares as well as provisions relating to financial assistance. Moreover, it would be necessary to regulate disclosures and prospectuses in a new way.

The number and scope of exemptions could perhaps be reduced by, first, simplifying the exchange and reducing its functions to core functions for the firm (section 8.2) and, second, relying on the outsourcing of functions that would become too costly for the firm to organise internally (section 8.9). As regards the former, the regulatory compliance challenges would remain. Even where trading is regarded as a commodity and a standard product for traders

and issuers, it requires the organisation of complex activities. This makes it important to rely on outsourcing and exemptions.

We can have a look at some core areas that should be taken into account when designing new exemptions.

The regulation of investment firms. Many necessary exemptions relate to investments firms. The business of investment firms is highly regulated.

Investment firms are subject to prudential rules. In the EU, it is understood that "the scope of prudential regulation should be limited to those entities which, by virtue of running a trading book on a professional basis, represent a source of a counterparty risk to other market participants".[303]

Some entities either do not run a trading book on a professional basis or do not trade with external market participants. This is reflected in the exemptions listed in MiFID II.[304] For example, the exemptions cover intra-group activities, activities that are incidental to other regulated activities, and in some cases dealing on own account. MiFID II therefore does not apply to:

- "persons providing investment services exclusively for their parent undertakings, for their subsidiaries or for other subsidiaries of their parent undertakings";
- "persons providing an investment service where that service is provided in an incidental manner in the course of a professional activity and that activity is regulated by legal or regulatory provisions or a code of ethics governing the profession which do not exclude the provision of that service";
- "persons providing investment services consisting exclusively in the administration of employee-participation schemes"; or
- "persons providing investment services which only involve both the administration of employee-participation schemes and the provision of investment services exclusively for their parent undertakings, for their subsidiaries or for other subsidiaries of their parent undertakings".

There is an optional exemption. Member States may under some circumstances choose not to apply MiFID II to "any persons for which they are the home Member State, provided that the activities of those persons are authorised and regulated at national level" and those persons "are not allowed to hold client funds or client securities and which for that reason are not allowed at any time to place themselves in debit with their clients".[305]

303 Recital 50 of Directive 2014/65/EU (MiFID II).
304 Article 2(1) of Directive 2014/65/EU (MiFID II).
305 Article 3(1) of Directive 2014/65/EU (MiFID II).

Obviously, a limited-liability company is not regarded as an investment firm just because it issues its own shares to investors, sells its own shares to investors, or buys its own shares back from investors. This is what companies do in the ordinary course of business. Share issuings and buybacks are regulated in company law.[306]

The proposed microexchange is not like existing trading venues. This issuer-owned marketplace would bring together third party buying and selling interests but arguably not in functionally the same way as a traditional trading venue.[307] Counterparty risk can in the case of microexchanges be reduced when:

- there is a central counterparty;
- there are single-price periodic call auctions;
- trading is automated;
- banks are used as an automated screening mechanism for buyers and sellers;
- neither the company nor the SPV are allowed to hold third party funds or securities; and
- access to the regime is limited to small public limited-liability companies that meet minimum requirements.

In any case, new exemptions would be necessary to facilitate the development of the proposed microexchange. MiFID II should not apply to:

- persons providing investment services exclusively for their own shareholders or the shareholders of their parent company;
- persons providing investment services consisting exclusively in the administration of a microexchange (a marketplace for the shares of one company only belonging to the company or its wholly-owned subsidiary);
- persons providing an investment service where that service is provided in an incidental manner in the course of the operation of a microexchange and that activity is regulated by specific legal or regulatory provisions; and

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306 See, for example, Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

307 Recital 17 of Directive 2014/65/EU (MiFID II): "… While trading venues are facilities in which multiple third party buying and selling interests interact in the system, a systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue." Article 4(1) of Directive 2014/65/EU (MiFID II): "For the purposes of this Directive, the following definitions apply: … (20) 'systematic internaliser' means an investment firm which, on an organised, frequent systematic and substantial basis, deals on own account when executing client orders outside a regulated market, an MTF or an OTF without operating a multilateral system;…"

– persons providing investment services that consist of the development and maintenance of a microexchange platform and making it available to users.

Dealing on own account. There is a MiFID II exemption for dealing on own account. However, the present exemption is qualified. It does not apply to persons that "(i) are market makers; (ii) are members of or participants in a regulated market or an MTF or have direct electronic access to a trading venue; ... or (iv) deal on own account when executing client orders".

A central counterparty deals on own account. A counterparty participating in the operation of the microexchange could be regarded as a market maker,[308] as a member or participant of an MTF,[309] as a person having direct electronic access to a trading venue, or as a person dealing on own account when executing client orders. The present qualified exemption would, therefore, not apply to operators of microexchanges that deal in shares. It should be looked into. To facilitate the operation of a microexchange through an SPV, the exemptions should cover the activities of both.

The regulation of central counterparties. Central counterparties are used in order to reduce counterparty risk, transaction costs, and systemic risk. For this reason, central counterparties are subject to a strict regulatory regime.

In the EU, central counterparties can be regarded as "investment firms" under MiFID II[310] and will therefore need an authorisation.[311] They are subject to minimum capital requirements under CRD[312] and CRR.[313] Their capital should be proportionate to various risks stemming from their activities.[314] Central counterparties need an authorisation even in OTC markets under EMIR. The strict reg-

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308 Point (7) of Article 4(1) of Directive 2014/65/EU (MiFID II).

309 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II).

310 Article 1(1) of Directive 2014/65/EU (MiFID II).

311 Article 1(2) of Directive 2014/65/EU (MiFID II).

312 Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

313 Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

314 Recital 48 of Regulation 648/2012/EU (EMIR): "Authorisation of a CCP should be conditional on a minimum amount of initial capital. Capital, including retained earnings and reserves of a CCP, should be proportionate to the risk stemming from the activities of the CCP at all times in order to ensure that it is adequately capitalised against credit, counterparty, market, operational, legal and business risks which are not already covered by specific financial resources and that it is able to conduct an orderly winding-up or restructuring of its operations if necessary."

ulation of central counterparties gives reason to outsource this function to an authorised CCP. The SPV would need exemptions to take care of such functions.

The regulation of trading venues. The regulatory regime for stock exchanges and other securities trading venues has a large scope. The proposed microexchanges would fall within the scope of the regulatory regime for stock exchanges in both the EU and the US. In the US, the Securities Exchange Act of 1934 contains a broad definition of the term "exchange".[315] In the EU, the main rule is that all trading venues in the jurisdiction are governed by the same regulatory regime.[316]

According to its wording, MiFID II applies to "market operators", among other things.[317] Alternative trading systems can often be regarded as "multilateral trading facilities" (MTFs).[318] There is an authorisation requirement for both.[319]

While some of the duties of the operators of an MTF could even be applied to microexchanges,[320] some would not be meaningful when trading is limited to the common equity shares of one issuer only and trading in the shares is limited to the microexchange.[321] Microexchanges and the nominal ownership and operation of microexchanges would therefore need to be exempted from the regulation of trading venues in the EU.

Systematic internalisers. One may ask whether the owner or operator of a microexchange could be regarded as a systematic internaliser in the light of the

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315 Securities Exchange Act of 1934, 15 U.S.C. § 78(c)(a)(1): "The term 'exchange' means any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange."

316 See recital 14 of Directive 2014/65/EU (MiFID II).

317 Article 1(1) of Directive 2014/65/EU (MiFID II).

318 Point (22) of Article 4(1) of Directive 2014/65/EU (MiFID II): "'multilateral trading facility' or 'MTF' means a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract in accordance with Title II of this Directive".

319 Articles 5(1) and 5(2) of Directive 2014/65/EU (MiFID II).

320 See, for example, Article 18(1) of Directive 2014/65/EU (MiFID II) on transparent rules and procedures for fair and orderly trading; Article 18(6) on the disclosure of responsibilities for the settlement of transactions; Article 18(9) on certain compliance obligations; Article 18(10) on certain disclosures to the competent authority; Article 18(11) on ESMA technical standards; and Article 19(1) on specific requirements.

321 See, for example, Article 18(2) of Directive 2014/65/EU (MiFID II) on listing rules; Article 18(8) on admission to trading without the consent of the issuer.

current wording of MiFID II.[322] First, only an investment firm can act as a systematic internaliser according to the wording of MiFID II. It is proposed here that microexchanges are exempted from the regulation of investment firms. Second, a systemic internaliser must not operate a multilateral system.[323] A microexchange is functionally a multilateral system. An exemption would again be necessary.

8.11 Enforcement

The microexchange would need new kinds of sanctions and enforcement duties. Where the issuer uses its own marketplace, the duty to enforce sanctions against the issuer and the marketplace must be allocated to somebody else.

You need mandatory provisions of law and enforcement by the state in order to facilitate the development and operation of microexchanges. If a company may use its own microexchange to create a marketplace for its shares, exchange self-regulation must be replaced by laws and the enforcement of rules must be allocated to public authorities.[324] The scope of the self-regulation of traditional exchanges has been reduced according to the current regulatory trend.[325]

To create an enforcement mechanism, it would be necessary to use duties under securities laws and criminalisations. Such norms customarily are enforced by the state. Provisions of company law generally lack an effective enforcement mechanism (see section 2.4.11). Provisions of company law can nevertheless be used for the purpose of creating mandatory structures, in this case by making the microexchange available only to a new kind of legal entity, that is, the small public limited-liability company.

322 Point (20) of Article 4(1) of Directive 2014/65/EU (MiFID II). See also recital 17 of Directive 2014/65/EU (MiFID II): "… In order to ensure the objective and effective application of that definition to investment firms, any bilateral trading carried out with clients should be relevant and criteria should be developed for the identification of investment firms required to register as systematic internalisers. While trading venues are facilities in which multiple third party buying and selling interests interact in the system, a systematic internaliser should not be allowed to bring together third party buying and selling interests in functionally the same way as a trading venue."

323 Point (19) of Article 4(1) of Directive 2014/65/EU (MiFID II) on the definition of a "multilateral system"; point (22) on the definition of a "multilateral trading facility".

324 Gadinis S, Jackson HE (2007) pp 1243 – 1244: "Ultimately, who should be responsible for regulating securities markets? What role should central governments play? What powers should administrative agencies have, and what issues are better left to the stock exchanges themselves?"

325 Macey JR, O'Hara M (2005) p 580: "[S]elf-regulation in today's environment is systemically dysfunctional."

Microexchanges and issuers need continuous oversight in order to maintain high-quality standards for market participants.[326] Market abuse should be policed like on regulated markets.

This said, too high standards and too harsh sanctions would be likely to keep the number of companies with publicly-traded shares too low and harm retail investors collectively. Rather than sanctions, the primary focus should be on structural measures designed to foster the interests of the firm and to align the interests of shareholders *inter se*.[327]

On a traditional stock exchange, the ultimate sanction available to the operator for disciplining purposes is expulsion from the exchange.[328] To protect retail investors, four issues should be addressed in the context of microexchanges: the operation of the microexchange when the issuer does not fulfil minimum requirements; the operation of the microexchange in the case of abuse by the issuer or its controlling shareholders; the right of retail investors to sell their shares to the controlling shareholder or shareholders of the issuer (sell-out right); and sanctions against the fintech companies that provide the trading platform.

On a traditional exchange, the stock exchange's regulatory power was initially based on contract.[329] The nature of contracts changes in the proposed new context with fintech competing for issuers and retail investors to create two-sided network effects. The use of a digital platform for trading is based on a contract between the service provider and the service buyer. Discontinuation of the contract would hamper or prevent continued trading, unless a replacement is found. It would therefore be necessary to address questions relating to the contract between the service provider, the issuer, and the SPV that is the nominal owner of the marketplace. In the EU, addressing these questions through regulatory action could in practice mean using the Digital Content Directive[330] and GDPR[331] as models for regulation in a B2B context.

326 For traditional stock exchanges, see Gadinis S, Jackson HE (2007) pp 1246–1248.

327 For many fundamental questions relating to the allocation of sanctions, see Tountopoulos VD (2019).

328 Gadinis S, Jackson HE (2007), p 1246.

329 *Ibid.*, p 1248: "As stock exchange regulatory power was, at least initially, based on contract, the exchanges' sanctioning abilities were structured in a contract-like manner. As such, discontinuation of the contract often constituted the harshest measure over the regulated entity, which was either a trading member or a listed firm. Consequently, the exchange had the power to devise less strict measures that addressed the particular concerns associated with the behavior in question."

330 Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services.

One may also note that enforcement duties should not be allocated to platform operators. The development of microexchanges would not be possible without digital platforms. Where enforcement duties are allocated to fintech at the early stage of development, development is hampered by the extra cost of policing and enforcement, and large banks whose core competences include regulatory compliance are given a competitive advantage. Even more importantly, the functions of the state should not be allocated to private enterprices.

8.12 Conclusions

Because of powerful trends, it is very difficult to increase the number of companies with publicly-traded shares and retail investors' direct share ownership, and to reduce the growth of financial inequalities. Drastic and innovative measures may be necessary to change the trend.

For this reason, we propose creating the microexchange as a new kind of marketplace for secondary trading in the shares of one issuer only. The microexchange would be based on a digital platform.

In this highly speculative Chapter, we have discussed how a regulatory framework for the microexchange could look like and made several proposals such as the following.

The microexchange cannot be developed without state regulation and a new regulatory framework. The regulatory framework should be based on the principle of regulatory dualism. Exemptions from the current regulatory regime for financial markets would be necessary.

The microexchange should be a simplified marketplace. Its functions should be limited to facilitating secondary trading in the shares of one issuer.

There should be eligibility criteria. One of them is the company form. The use of a microexchange should be limited to the "small public limited-liability company", a new company form proposed in Chapter 9. Moreover, the nominal owner of the microexchange should be an SPV belonging to the issuer.

Rather than maximise liquidity, the regulation of the microexchange should focus on ensuring sufficient liquidity for the purposes of the issuer. We propose the use of periodical single-price call auctions for the matching of trades.

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331 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

The outsourcing of functions should be made possible to reduce costs and to benefit from economies of scale.

The new trading environment should be complemented by new enforcement mechanisms. Generally, the enforcement function should be allocated to the state.

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9 The Small Public Limited-Liability Company

9.1 General Remarks

The purpose of this book is to increase the number of companies with publicly-traded shares and retail investors' direct equity investments. One of the many proposals in this book is to create "the small public limited-liability company" as a new company form for Europe (section 6.4.14).

Like the proposed "microexchange" (section 6.4.13 and Chapter 8), the new company form could be seen as an extreme thought experiment to find out how to make incremental improvements to the current system, or as a radical way to address the problems of the current system. On one hand, the proposed new company form might be politically difficult to achieve.[1] On the other, it could be regarded as a natural evolution of the model with a small (GmbH, SARL) and large (AG, SA) limited-liability company.[2] In any case, the proposed new company form could help to address several complex problems.

First, there is a shortage of small companies with publicly-traded shares. The shortage may partly be caused by company and securities law. The current regulatory framework for companies with publicly-traded shares is designed with large firms in mind. The one-size-fits-all principle of current regulation can make it more difficult for SMEs to go public (sections 1.3 and 5.2).[3]

Second, there is no secondary market for shares subscribed for by early investors in private placements or by crowdfunding contributors in equity crowdfunding. The lack of a secondary market tends to hamper the primary market. Therefore, it could be one of the structural factors that can make high-quality start-ups and growth firms turn to venture capital investors for funding. VC in-

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1 See Ghetti R (2018) p 828; Antunes JE, Baums T, Clarke BJ, Conac PH, Enriques L, Hanak AI, Hansen JL, de Kluiver HJ, Knapp V, Lenoir N, Linnainmaa L, Soltysinski S, Wymeersch EO (2011) pp 29 and 31.

2 Giudici P, Agstner P (2019) p 597, Abstract: "[T]he Italian lawmaker has slowly transformed the SRL and created what is basically a new type of company (the SME SRL), which lies in between the two original types but whose borders are not fully clear."

3 See also Hornstein GD (1950) p 1040; Conard AF (1975) p 441: "Fixation on the giants of the corporate world may be quite proper for macroeconomists; the decisions made in the giant corporations supply, in part, the directional signals of United States production and consumption. But the same fixation can be very misleading when applied to the problems of corporate governance. Professor Eisenberg has shown in a recent article that analysis of corporations has been greatly distorted by assuming that all or most corporations are miniature copies of AT&T and GM." Citing Eisenberg MA (1969).

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vestors tend to prefer a trade sale. At the same time, VC funding tends to exclude the participation of retail investors.

Third, to address those two problems, we propose a new trading venue we call "the microexchange" (Chapter 8). For microexchanges to work, they should earn the trust of retail investors. A microexchange should only be available to companies that fulfil pre-defined minimum requirements. The development of microexchanges must be supported by company law. The provisions of company law and the mechanisms of the microexchange should be developed at the same time to ensure that they are aligned and serve the same goals.

What this means is that the proposed "small public limited-liability company" is not intended as a general-purpose company form for all start-ups. For example, it is not intended as a European alternative to the Delaware corporation. A company law regime based on the use of such a company form would not suffice to create enough companies with publicly-traded shares, because there are problems in the US market as well. More needs to be done. Having said this, the introduction of a functional equivalent to the Delaware corporation or a more flexible company form could help ambitious European start-ups and SMEs in countries that still lack a suitable limited-liability company form for venture capital.[4] This book focuses on finding alternatives to venture capital and even alternatives to crowdfunding.[5]

Firm size v share ownership, private v public. Even a new company form has its roots in the history of company law.[6] Both the size of the firm (small v large) and public share ownership (privately held shares v publicly-traded shares) have mattered in company law history. What has been missing is a tailor-made company form for small firms with publicly-traded shares.

The size of the firm has influenced the scope of sector-specific regulation. For example, in EU company law, the statutory audit requirement applies to "public-interest entities, medium-sized and large undertakings" (section 2.4.6).[7]

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4 Giudici P, Agstner P (2019) p 598.

5 Compare *ibid.*, pp 614 – 616 on the Italian search for a company form for tech firms that prefer venture capital and crowdfunding: "Following the 'Restart Italia!' report, the government enacted a 2012 legislative package called 'Growth Decree' (Arts. 25 – 32 of the Decree Law 18th October 2012, no 179, converted into Law 18th December 2012, no. 221)."

6 In contrast, see Callison W, Fenwick M, McCahery JA, Vermeulen EPM (2018) p 738 on a company form for SMEs: "In particular, in developing a new organizational form of this kind we should not defer to what is already out there or seek to build on some compromise between existing legal approaches."

7 Article 34(1) of Directive 2013/34/EU (Directive on annual financial statements).

In German corporate governance, mandatory co-determination depends on the company form and the number of employees (section 2.4.10).[8]

The size of the firm has mattered in securities law. Securities law is an important example of sector-specific regulation applicable to companies. While securities law applies to all entities with publicly-traded shares and can in many cases be a functional equivalent to company law (section 4.1), securities law is designed with large firms in mind, making the cost of regulatory compliance in relation to the size of the firm an important issue in securities law discourse.

Company laws have produced different company forms for small firms and large firms (section 2.4.9). For example, the German Aktiengesellschaft (AG) was complemented by the Gesellschaft mit beschränkter Haftung (GmbH) when the German GmbH Act was adopted in 1892. In France, the SARL was created to complement the SA in 1925.[9] The distinction between the AG and the GmbH, and between the SA and the SARL, became necessary, because a company form designed for large firms, the shares of which often were traded in public, did not suit small firms, the shares of which were held privately.

There are particular provisions of EU company law for legal entities whose shares could be traded in public, that is, "public limited-liability companies" such as the AG and the SA either with or without publicly-traded shares. Public limited-liability companies have been regulated in two ways in EU company law.

First, Member States' company laws were harmonised by many company law directives that focused on public limited-liability companies. Many of the earlier directives have been codified in Directive (EU) 2017/1132.[10] This Directive also shows why the EU has chosen to focus on public limited-liability companies: "[C]oordination … is especially important in relation to public limited liability companies because their activities predominate in the economy of the Member States and frequently extend beyond their national boundaries."[11] Moreover, "[i]n order to ensure minimum equivalent protection for both shareholders and creditors of public limited liability companies, the coordination of national provisions relating to the formation of such companies and to the maintenance, increase or reduction of their capital is particularly important."[12]

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8 § 1 of Gesetz über die Drittelbeteiligung der Arbeitnehmer im Aufsichtsrat (Drittelbeteiligungsgesetz, DrittelbG). For GmbHs, see § 1(1) number 3 of the DrittelbG.

9 Loi du 7 mars 1925 institution des sociétés à responsabilité limitée.

10 Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law.

11 Recital 2 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

12 Recital 3 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

Second, there is a particular European company form created by the SE Regulation.[13] The SE is a public limited-liability company governed by the SE Regulation, the statutes of the SE, and the law of the Member State in which the SE has its registered office.[14]

While the harmonisation of Member States' company laws can be regarded as a success, unified European company forms have not yet become popular.[15]

In any case, there is no tailor-made company form for small firms with publicly-traded shares in the EU. There was a proposal for a company form for small firms with privately held shares. After the adoption of the SE Regulation, the European Commission proposed a Council Regulation on the statute for a European private company (Societas Privata Europaea, SPE).[16] The SPE proposal of 2008 was perceived as very controversial and the Commission withdrew it in the REFIT Communication of 2013.[17] The two key reasons for the political failure of the proposal were said to be the lack of adequate provisions on employee participation and the question whether an SPE should be allowed to register in a country other than the country in which its head office is located.

The adopted SE Regulation and the failed proposal for a SPE Regulation can provide useful ideas about how to create a company form for small firms that prefer to have publicly-traded shares. In the EU, the small public limited-liability company would need to be a "small SE", either at national level as a form of regulatory development or competition, or at EU level as a European company form.

Company law history and start-up practice. To create a new public limited-liability company for small firms, we can seek guidance in company law history and start-up practice.

Ways to regulate companies have been tested since the nineteenth century (section 2.4). When regulating companies and corporate governance, it is a good idea to foster the interests of the firm (in German "das Unternehmen", in French "l'entreprise", section 2.4.13), make the governance model self-enforcing,

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13 Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE).

14 Article 9(1) of Regulation 2157/2001 (SE Regulation).

15 See Ghetti R (2018) pp 832–833.

16 Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final.

17 Regulatory Fitness and Performance (REFIT): Results and Next Steps. Communication from the Commission, COM(2013) 685 final. See nevertheless footnote 16: "The Commission is considering presenting a new proposal."

and make the governance model flexible enough to facilitate innovation (section 2.3.3).[18]

Start-up funding practices have focused on the success of the business venture, that is, the firm. Founders, family, friends, and angel investors have contributed relatively small amounts of capital to the venture in exchange for common stock.[19]

In angel funding practice (sections 5.3 and 6.3.13), angel investors have preferred "informal methods of screening and monitoring entrepreneurs".[20] They have left plenty of discretion to founders and have not required board seats.[21]

If the business venture grows, the start-up needs to raise new funding. Attractive companies have raised venture capital from investors that subscribe for or buy convertible preferred stock or convertible notes.[22] An angel investor's financial payoff comes from a small number of start-ups that raise venture capital and provide a successful exit.[23] These aspects can be taken into account when designing the new company form.

Design principles. To create the small public limited-liability company, regulators should first choose design principles. In this Chapter, we will propose some core design principles. They include the following: use mandatory provisions of law to standardise the company form (section 9.2); make the company form attractive to firms by laying down a board duty to act in the interests of the firm (section 9.3); require a two-tier structure at board level (section 9.4); do not use mandatory co-determination (section 9.5); facilitate electronic voting (section 9.6); facilitate the use of a microexchange (section 9.7); require a low minimum subscribed and paid-for share capital for small public limited-liability

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18 See already Mäntysaari P (2012) Chapters 8 and 9.
19 Coyle JF, Green JM (2014) pp 154–155.
20 Ibrahim DM (2008) p 1408.
21 *Ibid.*, pp 1422–1423: "... a fairly consistent picture of angel contract design. They reveal that traditional angels use simpler contracts that are comprised of more entrepreneur-friendly terms than do venture capitalists. As a general rule, these contracts employ none of the five methods venture capitalists have devised to mitigate uncertainty, information asymmetry, and agency costs in start-up investments. First, traditional angels do not stage their investments. [...] Second, the traditional angel receives common instead of preferred stock in exchange for her investment. [...] Third, while board seats are commonly granted in venture capital rounds, they do not appear common in angel rounds. [...] Fourth, few angels contract for negative covenants. Wong's study found that negative covenants allowing investors to veto management decisions were included in only 5.1 percent of angel contracts. [...] Finally, like negative covenants, specific exit rights also may be used less frequently by angels than other venture capital protective devices."
22 *Ibid.*, pp 154–155.
23 Ibrahim DM (2008) p 1408.

companies in general and a higher share capital for those small public limited-liability companies that want to use a microexchange (section 9.8); permit just one or two classes of shares (section 9.9); ensure pre-emptive rights and the equal treatment of shareholders, but apply pre-emptive rights in a flexible way to facilitate new funding rounds (section 9.10); facilitate exits but ensure protection against the market for corporate control (section 9.11); ensure that the company's capital is used in the interests of the firm (section 9.12); rely on mixed monitoring and public enforcement (section 9.13); and make the change of company form easy (section 9.14).

General company law reform. The proposals could even be used as part of a general company law reform. How such reforms would play out is difficult to predict.

First, all company law reforms are embedded in existing company and commercial law.[24] The nature of company law as a "matrix" increases the cost of regulatory changes and is one of the causes of path dependency (section 2.3).

Second, company laws are value-based systems (sections 3.4.13 and 6.2). Reforms are more difficult to pull off where the values represented in company law discourse are too heterogeneous. Calls for reforms are currently not based on the same set of values.

Third, company law can be reformed at the national or international level. One can distinguish between unilateral amendment of company law, harmonisation, and unification with unification as the most costly and politically most controversial alternative.[25]

This said, EU company law is facing a new reality after the withdrawal of the UK. There is more room for a European company law reform, because the company laws of the remaining Member States share the same continental European roots and roughly similar values.[26]

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24 Ghetti R (2018) p 831: "The regulation of [European company forms] shows that company forms are not independent of national law. The legal unification of company forms would require common rules in lieu of national ones and the complete regulation of all aspects of company life. This is obviously more difficult than mere harmonisation."

25 Ghetti R (2018) pp 817–818 and 836; Giudici P, Agstner P (2019) on the Delaware corporation as a driver of company law change in Italy.

26 Koutsias M (2019).

9.2 Mandatory Provisions

Where the objective is to increase the number of companies with publicly-traded shares and retail investors' direct equity investments by facilitating the operation of a large number of microexchanges, the company law regime should largely consist of mandatory provisions of law that ensure standardisation and increase the transparency of the new company form.

Standardisation is common practice in all organised securities, commodities, and derivatives markets. In organised OTC markets, standardisation is based on standard contracts such as master agreements in addition to the regulation of market participants and market structure.[27] Regulated equity markets are standardised markets. The public trading of shares does not work without extensive standardisation. The standardised legal framework can be based on company law, securities law, and/or exchange self-regulation.[28]

In the case of the proposed new company form, these rules cannot be made by the exchange or the exchange operator, because there is no traditional exchange. The nominal owner of the proposed microexchange is an SPV belonging to the issuer. Moreover, if the rules were made by the operator of the platform that microexchanges use when organising trading, the platform operator would be regarded as the operator of a regulated market subject to the customary regulatory compliance obligations.

Retail investors are protected by mandatory standards. Companies that issue shares to the public should comply with statutory minimum standards. Properly designed and enforced statutory minimum standards can reduce retail investors' search costs, transaction costs (as the standards are the same for all companies),[29] and the risk of a market for lemons (as there is no private race to the bottom as far as the standards are concerned).[30] Standards can be based on compa-

27 See, for example, Regulation 648/2012 (EMIR).

28 This does not apply to micro-, small- and medium-sized enterprises (MSMEs). See Callison W, Fenwick M, McCahery JA, Vermeulen EPM (2018) p739: "[I]n order to be fully successful, any organizational form needs to be flexible enough to accommodate the diversity of MSMEs."

29 Compare Action Plan on Building a Capital Markets Union. Communication from the Commission, COM(2015) 468 final, section 1.3: "The information gap between SMEs and investors can be a hurdle to non-bank funding. In particular, search costs prevent potential investors from identifying and assessing attractive companies in which to invest. There is a need, on the one hand, to make small firms in need of financing better aware of the market-based funding options available to them and, on the other, to make firms more visible to prospective local and pan-European investors."

30 Akerlof GA (1970). Daniel Davies, A scammer's charter for European capital markets. Financial Times, 9 November 2015: "… a push for deregulation always runs the risk of turning into a

ny law or securities law. Standardisation based on the mandatory provisions of company law could thus help to increase retail investors' direct equity investment.[31] In fact, this can help to explain the mandatory nature of the provisions of the German Aktiengesetz and the US Securities Acts.

In contrast, a high level of flexibility for a specific company form can increase investors' search and transaction costs and reduce retail investors' direct equity investment.[32] A high level of company law flexibility would therefore need to be complemented by mandatory norms from another source such as securities law or the listing rules of a stock exchange. This is what has happened in the US.

Restricting such flexibility for a new company form would not restrict choice in company law as a whole. The introduction of a new company law regime for small firms with publicly-traded shares would increase choice regardless of whether the new regime consists of mandatory or dispositive provisions of law. The proposed regime would still be complemented by other available company forms. The existence of alternative company forms would ensure a sufficient level of choice and freedom of contract.[33]

The rules of company and securities law should lay down the required structures and standards of behaviour and avoid overreliance on disclosures (sections 3.4.7 and 6.3.12). Clear requirements (the contents of which when applied to future facts can be predicted with reasonable clarity in advance) can increase the transparency of the required standards, help enforcement, increase compliance, and generally influence behaviour. Open standards (the exact contents of which can only be determined after the fact) can fill gaps between the more detailed

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'scammer's charter'. Red tape and expense in Europe's equity markets exist for a reason. The barriers that hold back small companies seeking equity financing are also the ones that separate unscrupulous stock promoters from investors' wallets."

31 In contrast, see Kitch EW (2005) pp 36 – 37 arguing for freedom to choose the regulatory regime: "The argument for issuer and purchaser choice is that purchasers are just as capable of judging the information disclosure and liability regime that they prefer to govern the securities they purchase as they are able to judge the terms of the security, or to make judgments about the economic future of the issuer." This view looks rather optimistic.

32 Compare Kitch EW (2005) p 35: "Corporate law has come to be understood as a system of multi-party contractual relationships, a subpart of contract law. Corporate law provides default rules that can be varied by the parties."

33 Compare Kitch EW (2005) pp 36 – 37: "Roberta Romano has advanced the idea that the contractual choice approach should be extended to securities regulation by amending the securities statutes so that corporate issuers could choose whether to be subject to their requirements … I argued that the Romano proposal is less radical than it appears because of the influence the contractual idea already has had on securities regulation. For instance, issuers can choose to sell securities under the provisions of the 1933 Securities Act, or they can choose to sell them outside the provisions of the Act by following the procedures for a private placement."

requirements. The most important of such standards is the rule that sets out the corporate interest, that is, the interests that corporate bodies are expected to serve when acting as or on behalf of the company (section 2.4.13).[34]

9.3 Duty to Act in the Interests of the Firm

The small public limited-liability law should lay down a board duty to act in the interests of the firm (sections 2.4.13, 6.3.10 and 6.3.11). The same duty should apply to any other statutory body responsible for the administration of the company (such as a managing director or directors).

It is customary to distinguish between the legal entity, the firm (das Unternehmen, l'entreprise), and shareholders in German and French company law. The interests of the company are interpreted as the interests of the firm. The board of a public limited-liability firm thus has a legal duty to act in the interests of the firm (Unternehmensinteresse, l'intérêt social). The interests of the firm are long-term.

The notion of the firm customarily is not used in the company law discourse of common law countries. However, the interests of the firm matter in start-up funding practice. Founders turn to angel investors and venture capital investors that can benefit the business venture. Shareholders, employees, law firms, and many other stakeholders are chosen on the basis of how much they can contribute to the success of the firm.

To make company law useful for firms and foster the development of successful firms, the better alternative therefore is to lay down a mandatory duty to act in the interests of the firm.[35] This means the rejection of both shareholder

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34 See also the proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Chapter V: "The Regulation imposes on directors the duty of acting in the best interests of the company ... The Regulation lays down a general standard of care by requiring from directors the care and skill reasonably required in the conduct of business ... Directors are required to avoid any actual or potential conflicts of interests ... The Regulation establishes directors' liability for any loss or damage suffered by the SPE due to the breach of their duties deriving from the Regulation, articles of association or a resolution of shareholders."

35 The SPE proposal used the notion "interests of the company". Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter V: "The Regulation imposes on directors the duty of acting in the best interests of the company. Accordingly, directors' duties are owed to the SPE and may only be enforced by the company. The Regulation does not give individual shareholders or creditors the right to directly sue the members of the management body."

primacy and stakeholder approaches.[36] The interests of the firm are not the same thing as the interests of its stakeholders, but the firm will need to take any relevant interests into account in order to survive in the long term.

9.4 A Two-Tier System

The small public limited-liability should have a two-tier system with either a two-tier board or a board monitoring one or more managing directors.[37]

In late nineteenth-century Germany, it was understood that management and monitoring should be separated at the board level. This led to the German company law reform of 1884 (section 2.4.5). It was also understood that small shareholders make poor monitors due to their limited resources and incentives.

In the EU, the SE Regulation permits choice between "either a supervisory organ and a management organ (two-tier system) or an administrative organ (one-tier system) depending on the form adopted in the statutes" for an SE.[38] The SPE proposal would have permitted choice between a single director, several directors, a one-tier system, or a two-tier board system in the SPE's articles of association.[39]

To create a self-enforcing governance model with sufficient monitoring without the participation of retail shareholders and institutional investors, a two-tier model with both tiers required to comply with statutory standards looks like a good alternative for the small public limited-liability company.[40]

Under the two-tier model, a board for monitoring (a supervisory board)[41] monitors a management board responsible for the management of the company

36 See Mäntysaari P (2012) section 6.3.3.

37 See, for example, Hopt KJ (2019b) p 522; Gilson RJ (2014).

38 Article 38 of Regulation 2157/2001 (SE Regulation).

39 Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter V: "All decisions which are not listed in the Regulation or in the articles of association fall under the competence of the SPE's management body which is responsible for running the company. The articles determine the management structure of the SPE (a single director or several directors, a one-tier or a two-tier board system). However, if the SPE is subject to employee participation, the chosen management structure must allow for the exercise of this right. The shareholders of the SPE decide on the appointment and removal of directors."

40 See nevertheless Hopt KJ (2018) arguing for a right to choose between the one-tier and two-tier board.

41 See also §§ 111–112 of the German Aktiengesetz (AktG); SEC Release No. 34–86327 (July 8, 2019), I.1(D): "The Exchange believes the boards of directors should be engaged with the

(such as in a German AG) or one or more managing directors (such as in a German GmbH). Members of the management board are the top executives of the company. If the company has one or more managing directors (Geschäftsführer), the managing directors are the top executives of the company.

The independence of the monitoring function can be ensured by structural measures. No person should be member of both bodies at the same time.[42] Moreover, the two boards should be collegiate organs to ensure peer-to-peer monitoring.[43] Each member should have a statutory duty to act in the interests of the firm contributing to a more a long-term corporate culture.

Management board members or managing directors should be appointed by the supervisory board. Where management board members, that is, the top executives of the company, are appointed by the supervisory board, they are better shielded against non-controlling shareholders and have more discretion to act in the long-term interests of the firm.[44]

Members of the supervisory board should be appointed by shareholders in general meeting. When company law is based on the design principles of separating functions and avoiding situations of self-interested decision-making (section 2.4.11), shareholders in general meeting end up having this function. One may note that the mere fact that this function is allocated to this or that corporate body says nothing about nominal or beneficial ownership.

Share-based incentives should not be used for the remuneration of supervisory board members in their capacity as supervisory board members.

Generally, the remuneration of each supervisory board or management board member should not exceed what is reasonable. Without any statutory limit, remuneration levels would be likely to rise, because board members and senior managers would have the opportunity and incentives to increase their own pay.[45] A general open standard of reasonableness should be complemented by a prohibition of the most abusive practices such as golden handshakes.

LTSE-Listed Issuer's forward-looking, long-term strategy, rather than serving primarily an audit function and looking backwards, as many boards seem to today. The Exchange also believes that investors will find this information useful."

42 See also § 100 AktG.

43 Belot F, Ginglinger E, Slovin MB, Sushka ME (2014) p 376 on French companies: "Several proxy variables support the hypothesis that a high potential for private benefit extraction implies that a two-tier board structure is more likely to be an effective solution for corporate governance, consistent with [Adams RB, Ferreira D (2007)]." For private benefit extraction in US companies with a unitary board structure, see Bebchuk LA, Fried JM, Walker DI (2002).

44 Mäntysaari P (2012) Chapter 9.

45 See Bebchuk LA, Fried JM, Walker DI (2002).

Shareholders should not decide on the remuneration of management board members. Generally, small shareholders are poor monitors. The remuneration of management board members should be decided on by the supervisory board. The allocation of this function to the supervisory board should be complemented by mandatory provisions of company law laying down constraints on remuneration.

The separation of functions leads to shareholders in general meeting deciding on the remuneration of supervisory board members, again subject to constraints laid down by mandatory provisions of company law.

What this also means is that one should not rely on the regulation of shareholders' "say on pay" under the Shareholder Rights Directive (SRD II)[46] for the proposed new company form. SRD II relies on institutional investors and asset managers as monitors of strategy and long-term performance in listed companies,[47] and as monitors of the remuneration of each member of the company's administrative, management, or supervisory bodies. According to SRD II, shareholders are able to express their views on remuneration twice. The "say on pay" regime under SRD II would not work for the proposed small public limited-liability company, because this company form is designed for firms with one or more controlling shareholders and many retail investors. Controlling shareholders control the company in any case, and retail investors make poor monitors. Moreover, it is important to simplify the company law regime where possible. This does not exclude adequate disclosures and the right of shareholders to express their opinion.[48]

9.5 No Mandatory Co-Determination

The proposed small public limited-liability company should have neither mandatory co-determination nor mandatory employee membership on the supervisory board.

On one hand, the firm could benefit from diversity. Diversity of the work force can increase creativity and innovation. On the supervisory boards of large traditional German firms, employee representatives are used as a comple-

46 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending directive 2007/36/EC as regards the encouragement of long-term shareholder engagement (SRD II).

47 Recital 15 of Directive (EU) 2017/828 (SRD II).

48 See recital 28 of Directive (EU) 2017/828 (SRD II).

ment to shareholder representatives to create diversity and improve the quality of monitoring and decision-making. The supervisory board should have access to the know-how of employees.[49]

On the other, one of the reasons that led to the failure of the European Commission's SPE proposal was the Member States' disagreement on whether the SPE should fall within the scope of national employee participation and co-determination laws. The Commission pointed out that the SPE proposal was neutral as far employee participation was concerned.[50] In Germany, however, mandatory co-determination applies to larger SMEs regardless of the company form. For example, if a GmbH "as a rule" has more than 500 employees, it must have a supervisory board with a third of the seats allocated to employee representatives (section 2.4.10).[51]

The proposed small public limited-liability company should build on the SPE proposal. Since the composition of the supervisory board can influence the firm's survival chances, the general meeting – in practice, the founders or controlling shareholders – should have discretion to appoint supervisory board members.

This does not exclude employee representation on the supervisory board. To create diversity and mixed monitoring, and to improve the quality of monitoring and decision-making, employee representatives generally can be used as a complement to shareholder representatives on the supervisory board.[52] Many firms do this on a voluntary basis.

In many start-ups, employees in fact are shareholders and knowledgeable about the firm's operations. Employee shareholders can contribute to mixed monitoring as part of the firm's formal or informal governance structure thanks to their actual experience from the firm, first-hand information about its management, and long-term incentives to improve the firm.[53] In a start-up, the fundamental difference between key employees and various kinds of external investors (such as business angels, an accelerator, or the start-up's law firm) is

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49 Compare Hopt KJ (2018) p 277: "So versagt zwar die noch vorherrschende Meinung dem Aufsichtsrat einen direkten Zugriff auf Personal, das dem Vorstand nachgeordnet ist, auch solches in der zweiten Reihe."

50 Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter VI.

51 § 1 of Gesetz über die Drittelbeteiligung der Arbeitnehmer im Aufsichtsrat (Drittelbeteiligungsgesetz, DrittelbG). For GmbHs, see § 1(1) number 3 of the DrittelbG.

52 Hopt KJ (2018) p 277.

53 Macey JR, O'Hara M (2005) pp 571 and 573; Hansmann H (1988) p 294.

that key employees cannot spread their risks when investing human capital in the firm and are more dependent on the success of that particular start-up.[54]

9.6 Electronic Voting

Retail shareholders generally are bad monitors. For this reason, the monitoring of management should be done internally. There should be a two-tier structure at board level and statutory standards based on mandatory provisions of law. Corporate governance generally should be organised in the interests of the firm.

In some cases, powers nevertheless are allocated to shareholders in general meeting and shareholders are entitled to vote. The separation of functions and the need to reduce self-interested decision-making at board level mean that some decisions must be allocated from the board to the general meeting. To reduce costs, shareholders should have a chance to participate via electronic means. A shareholder who casts a vote at a general meeting should have a chance to verify whether the vote has been validly recorded and counted.

The role of proxy voting would need to be different in the proposed small public limited-liability company for two reasons. First, proxy voting rules benefit institutional investors with highly diversified portfolios, many foreign shareholdings, and proxy advisers.[55] The proposed small public limited-liability company with its microexchange would not be ideal for investment funds to invest in. Second, the company form is proposed for the purpose of increasing retail investors' direct equity investment rather than the holding of shares through chains of intermediaries.[56]

Proxy voting could be replaced by direct electronic voting and mandatory provisions of law addressing the most important issues of concern.[57]

54 For employee share ownership, see already Tarbell IM (1916) pp 230 – 257. For employee ownership when AI robots do more of the work, see Freeman RB (2018). See Macey JR, O'Hara M (2005) p 573 on how sometimes "the capacity of workers to monitor the management of the firm is superior to that of outside investors". For start-up lawyering, see Coyle JF, Green JM (2017).

55 Recital 25 of Directive (EU) 2017/828 (SRD II). For the regulation of proxy voting advice in the US, see Placenti FM (2019); The Economist, Out with the proxies, 16 November 2019. For the EU, see Schweiger R (2017).

56 See recital 4 of Directive (EU) 2017/828 (SRD II) on how shares of listed companies often are held through complex chains of intermediaries.

57 The Economist, Voting with your pocket, 14 April 2018: "An analysis by Institutional Shareholder Services (ISS), a proxy-advisory firm—which advises fund managers on how to vote on proposals—found that of the 459 shareholder proposals submitted by early April this year,

9.7 Facilitating the Use of a Microexchange

The small public limited-liability company is proposed here as a new company form to facilitate the use of a microexchange, that is, a marketplace for secondary trading in the shares of one company only. Microexchanges are proposed as a means to increase the number of companies with publicly-traded shares and retail investors' direct shareholding in growth firms (section 6.4.13 and Chapter 8).

The new company law regime should therefore make it possible to organise a microexchange, take corporate action relating to the use of a microexchange, signal the quality of an issuer that uses a microexchange, reduce transaction costs for companies using a microexchange, and reduce transaction costs for retail investors trading on a microexchange.

The regulation of microexchanges should be based on mandatory provisions of law. Mandatory provisions can protect investors, ensure the necessary standardisation, prevent a market for lemons, contribute to economies of scale, contribute to technological advancement, and make it easier for investors to compare investments.

There are examples of similar approaches in the past. The company law regime applicable to the German Aktiengesellschaft (AG) has a wide scope and is largely mandatory in order to create public markets and make it easier for investors to compare different investments.[58] The US Securities Acts of 1933 and 1934 are federal law and mandatory for issuers. Their general purpose was to protect investors and make the business of dishonest issuers more difficult. Moreover, the Securities Acts promote efficiency, competition, and capital formation (section 4.2.3).

To reduce traders' perceived risk exposure, the microexchange should be ring-fenced from the assets of the issuer. This can be achieved by the use of an SPV that is a subsidiary of the small public limited-liability company. The SPV should be incorporated in the same country as its parent company to simplify the regulatory framework, reduce the costs of regulatory compliance, improve monitoring and enforcement, reduce traders' risk exposure, and reduce tax evasion.[59] In the EU, such an SPV could benefit from the adoption of simpli-

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many fell under just a few headings: transparency about political spending, climate change, racial and gender diversity, and pay."

58 See, for example, § 23(5) AktG setting out the principle of statute stringency ("Satzungsstrenge").

59 In the EU, this would raise the question of freedom of establishment under Article 49 of the Treaty on the Functioning of the European Union. According to this proposal, the freedom of establishment should be guaranteed by the freedom to incorporate the proposed small public lim-

fied procedures for single-member limited liability companies under the proposed SUP (Societas Unius Personae) Regulation.[60]

The traders' risk exposure could further be reduced by obligations owed by the parent company to the SPV. It is in the interests of the parent company to ensure that the operations of the SPV are on a sound basis.[61] To be in a position to do so, the parent company should have a statutory minimum subscribed capital (section 9.7). Moreover, the parent company could have a company law duty to use its best efforts to ensure that the subsidiary (the microexchange) is in a position to fulfil its obligations or provide for a statutory guarantee for the subsidiary's obligations. Moreover, company law could permit the lifting of the limited liability of the parent company under some circumstances.

There should be rules laying down the decision-making process. Decisions on the use of a microexchange are akin to decisions on listing and delisting.

9.8 Minimum Share Capital

There should be a minimum subscribed and paid-for share capital for the proposed small public limited-liability company in the event that it wants to use the proposed microexchange.

On one hand, there should be no high minimum share capital for small public limited-liability companies in general. A high minimum share capital would hamper the use of this proposed new company form. In the EU, the SPE proposal set the minimum capital requirement at €1 in order to foster the business of start-ups.

On the other, the use of a microexchange should be reserved for companies that already have survived the seed phase and need more funding for the early expansion phase. There should be a way to signal a difference between such companies and the early-stage high-risk ventures that seek seed funding or crowdfunding. An adequate minimum and paid-for share capital for companies

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ited-liability company in the chosen country. A rule that sets out that the parent and the subsidiary in this case must be incorporated in the same country is akin to the rule that the registered office of an SE must be in the country of incorporation. Article 3(1) of Regulation 2157/2001 (SE Regulation).

60 See Conac PH (2015); critically Ghetti R (2018) pp 828 – 831.

61 Cicero said that a man's home is his castle: "Quid enim sanctius, quid omni religione munitius, quam domus unusquisque civium?" Cited in Book 4, Chapter 16 of William Blackstone's Commentaries on the Laws of England.

that choose to have their shares traded on a microexchange could be a way to signal a difference between such companies and higher-risk ventures.

Moreover, a minimum share capital requirement would perhaps reduce the risk of abuse, increase the firm's survival chances, reduce retail investors' perceived risk exposure, increase investors' trust in companies that use microexchanges, increase the use of microexchanges, and hopefully increase the number of companies with publicly-traded shares and retail investors' direct equity investments in growth firms.

In EU company law, the required minimum capital depends on the company. The Directive relating to certain aspects of company law provides that the minimum subscribed capital for public limited-liability companies shall be not less than €25,000.[62] The SE Regulation lays down a subscribed capital requirement of not less than €120,000.[63] Both are lower than the Listing Directive's[64] market capitalisation requirement of at least €1 million for companies that seek official listing. [65] A market capitalisation requirement would not work for the small companies that the microexchange is aimed for.

9.9 One or Two Classes of Shares

Growth firms often use multiple classes of shares. Should the use of multiple classes of shares be permitted or would a "one share, one vote structure" work better for the firm?

On one hand, one could argue there should be just one class of shares in the proposed small public limited-liability company for reasons of liquidity, transparency, and simplicity.

Shares in start-ups and SMEs are inherently illiquid. Their shares are less illiquid if there is just one class of shares as there will be more shares per class in that case. The use of just one class of shares could help to increase transparency, reduce abuse, and simplify regulation. Traditionally, early investors such as founders and angel investors have tended to subscribe for common equity

62 See Article 45(1) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

63 Article 4(2) of Regulation 2157/2001 (SE Regulation).

64 Directive 2001/34/EC of the European Parliament and of the Council of 28 May 2001 on the admission of securities to official stock exchange listing and on information to be published on those securities.

65 Article 43(1) of Directive 2001/34/EC (Listing Directive).

shares. The use of just one class of shares would not prevent the use of SAFEs, convertible notes, or other convertible securities (section 7.4).

A rule permitting just one class of shares would prevent the firm from issuing multiple classes of shares only temporarily and would not prevent it from issuing new classes of shares in the future. The firm could issue new classes of shares after changing its company form. After building a sufficient shareholder base and reaching a higher market capitalisation, the company might even be able to fulfil admission requirements and apply for a listing on an SME market.

On the other, the use of multiple classes of shares is common practice in growth firms (section 5.3), that is, the type of firms that the proposed company form is intended for. Moreover, a "one share, one vote structure" is not a legal requirement in US securities law[66] and EU company law.[67]

To make the proposed microexchange and the proposed small public limited-liability company relevant for founders and growth firms, the better alternative therefore is to permit the use of different classes of shares subject to restrictions balancing the different objectives.

The company should be permitted to use two classes of shares. Shares traded on a microexchange should be common equity each share conferring one vote. When the company uses a microexchange, the company should only be able to issue common equity shares. To make the microexchange and the small public limited-liability company relevant for founders and growth firms, the company should be permitted to have one additional class of shares issued before the commencement of trading on the microexchange.

9.10 Pre-Emptive Rights, New Funding Rounds and Equal Treatment

Shareholders' pre-emptive rights and the principle of equal treatment of shareholders should apply in the proposed small public limited-liability company.

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66 SEC Release No. 34 – 85828 (May 10, 2019), III.E.3: "Commission rules do not mandate that the rules of a national securities exchange must provide for a 'one share, one vote' requirement for listed issuers."

67 Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter III: "The Regulation allows shareholders a large degree of freedom to determine matters relating to shares, in particular the rights and obligations attached to shares. An SPE may issue ordinary or priority shares. Restrictions only apply when necessary in the interest of third parties or minority shareholders."

Generally, the equal treatment of all shareholders who are in the same position belongs to the most fundamental principles of EU company law.[68]

As regards pre-emptive rights, there is a fundamental difference between EU company law and US company law. Pre-emptive rights have their roots in continental European company law and are part of EU company law.[69] The right to decide on the issuing of shares and the waiving of pre-emptive rights is vested in the general meeting under the Directive relating to certain aspects of company law.[70] The Directive seems to provide a balance between shareholder protection and flexibility. In the US, all powers in the company customarily are vested in the board under the company's by-laws (section 2.4.10). Pre-emptive rights do not apply. In venture capital practice, however, it is customary to agree on the protection of shareholders in later funding rounds and in exits (section 5.3).

In the proposed small public limited-liability company, it should be made relatively easy to waive pre-emptive on a case-by-case basis to enable private placements, and there should be an exemption for the issuing of shares on an on-going basis under a programme.

A growth firm needs private placements. Private placements tend to be one-off transactions. When the company issues new shares to investors after waiving the pre-emptive rights of existing shareholders *ad hoc*, the price payable for the shares should not be lower than the fair value of the new shares based on the valuation of similar companies.

A growth firm could even benefit from a chance to sell existing shares or issue new shares to investors on an on-going basis under a programme. This is the opposite of a share buy-back programme. An exemption from pre-emptive rights for such a programme could be motivated if the programme is limited and the decision to adopt it requires shareholder consent.

9.11 Exits and the Market for Corporate Control

Both the free transferability of shares and the market for corporate control would need to work in a different way in the proposed small public limited-liability company. There should be lock-ins for the most important shareholders and tag-along rights (co-sale rights) for other shareholders.

68 Article 85 of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).
69 Article 72(1) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).
70 Articles 68(1) and 72(4) of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

Lock-ins and tag-along rights. The survival of a start-up largely depends on the quality of its founders and controlling shareholders. To increase the survival chances of the firm, the firm should have good controlling shareholders that contribute to the firm's long-term success. When the firm chooses to raise funding, potential investors will look at the quality of the founders and controlling shareholders. Diligent investors will do the same in secondary trading.

In corporate practice, it is customary to restrict the sale and purchase of shares.[71] In SME exchange practice, lock-ins for major shareholders have been used as a means to reduce illiquidity for other shareholders (section 6.3.14), and to align interests. In venture capital practice, founders may undertake non-compete obligations, obligations to work for the company in different capacities, and restrictions on share sales (section 5.3). Restrictions on exits are complemented by tag-along rights (or co-sale rights) in the event of exit. Tag-along rights are common practice in venture capital transactions. In US regulatory practice, the JOBS Act and Regulation Crowdfunding restrict resales (section 7.3).

Since new investors rely on the quality of the most important shareholders when assessing the quality of the firm, the interests of the core shareholders should be aligned with the long-term interests of the firm at least for a limited period of time.

For these reasons, market practice should be reflected in the use of statutory time-limited lock-ins for the most important shareholders after the issuing of new shares or the commencement of secondary trading on the microexchange. Moreover, where a controlling block of shares is sold during a pre-defined time period, other shareholders should have tag-along rights (or co-sale rights). Agreed tag-along rights tend to have a wider scope than the sell-out rights and the mandatory bid rule under the EU's Takeover Bid Directive.[72] A functional equivalent of a tag-along right can be created by a mandatory bid rule (see below).

One may ask whether the controlling shareholder should have a squeeze-out right, or no squeeze-out right unless the company form is changed first.[73] Again,

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71 See, for example, Hornstein GD (1950) pp 1047–1051 on closely held corporations; Mäntysaari P (2010c) Chapter 18 on takeover defences.

72 See Article 16 of Directive 2004/25/EC (Directive on takeover bids) on the sell-out right; Article 5(1) on the mandatory bid.

73 Compare the proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter III: "The Regulation does not provide shareholders with the right to squeeze-out minority shareholders. Nor does it put an obligation on the majority shareholder or the SPE to buy the shares of the minority shareholder

it is a question of balancing different interests. Small shareholders either may or may not want to part with their shares. The firm may benefit from a more dispersed share ownership structure or from having a sole shareholder. A controlling shareholder may need more discretion. Small shareholders may or may not benefit from the work of the controlling shareholder. In the light of the variety of these situations, the better alternative seems to be to increase flexibility for firms and controlling shareholders and choose a squeeze-out right for the proposed small public limited-liability company. There will be neither publicly-traded shares nor retail investors in the first place unless it is in the interests of firms and controlling shareholders.

Market for corporate control. Traditional stock exchanges and listed companies need rules for the market for corporate control.[74] If a traditional listed company is in the market for corporate control, the cost of shareholders as the firm's agents is increased, because the firm will need to invest more in structural takeover defences.

However, a start-up or a small growth firm customarily is not in the market for corporate control. It does not need to invest in structural takeover defences, because it has a concentrated share ownership structure. Where controlling shareholders sell their block of shares, corporate control changes hands.

One may therefore ask how to address the question of mandatory bids and public takeover bids in the context of the proposed small public limited-liability company.

A mandatory bid rule does not seem problematic. On one hand, the existence of a mandatory bid rule might hamper control transactions. On the other, a mandatory bid rule can also be regarded as a functional equivalent of tag-along rights that are common practice in venture capital transactions. Either a mandatory bid rule or mandatory tag-along rights could therefore be regarded as suitable for the proposed small public limited-liability company.

As regards public takeover bids, the most important rule for the firm is the absence of a board duty to accept the bid. In the EU, the Takeover Bid Directive

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(sell-out right). Such provisions may be adopted in the articles of association. However, the Regulation allows both the expulsion and the withdrawal of a shareholder under specific circumstances."

74 See, for example, Christiansen H, Koldertsova A (2009) p 211: "This consideration is reflected in section II.E of the OECD Principles of Corporate Governance which stresses the importance for corporate governance of markets for corporate control functioning in an efficient and transparent manner."

does not lay down any such duty. The target's board may thus say no.[75] In Delaware, the target's board has a right to defend the "corporate bastion" in the light of *Unocal* and *Revlon*.[76]

9.12 Use of Capital

Each firm has its own capital needs. Generally, the company's capital should be used in the interests of the firm (section 6.3.2). There should be restrictions on the distribution of assets to shareholders. The proposed small public limited-liability company has its particular characteristics that should be reflected in the regulation of the use of capital.

The proposed small public limited-liability company is a company form for growth firms. A young growth firm should focus on growth in order to survive. The distribution of assets to shareholders would be likely to hamper growth and make the firm's prospects worse. For this reason, it would be necessary to limit the amounts that may distributed to shareholders, and to regulate the decision-making process.

In other words, the legal capital regime should be stricter than in existing public limited-liability companies to make it more difficult for controlling shareholders to use their powers to distribute funds to themselves.[77]

Moreover, shareholders should not have a legal right to force the board to distribute assets to shareholders. Minority shareholders should have a right to veto the board's proposals on the distribution of assets to shareholders.[78]

75 See Articles 3(1)(b), 3(1)(c) and 9 of Directive 2004/25/EC of the European Parliament and of the Council of 21 April 2004 on takeover bids.

76 Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc. 506 A.2d 173 (Del. 1986); Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del. 1985).

77 For the legal capital regime, see Mäntysaari P (2010c) sections 5.3 and 5.4; Chapter IV of Directive (EU) 2017/1132 (Directive relating to certain aspects of company law).

78 The SPE proposal would have provided for more flexibility. Proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Explanatory memorandum, Chapter IV.

9.13 Monitoring and Enforcement

Generally, the regulation of the monitoring and enforcement functions of the proposed small public limited-liability company should be based on mandatory provisions of law. Where the company is a traditional company listed on a traditional exchange, these functions and many other corporate governance issues (section 2.3.3) can to some extent be regulated and enforced by the exchange.[79] The regulatory trend nevertheless is the increasing role of mandatory provisions of law.

The proposed small public limited-liability company that uses a microexchange is not like a traditional listed company, since the proposed microexchange is just an extended arm of the issuer and cannot have any rule-making function. A high level of standardisation would be necessary to increase transparency, reduce costs, and prevent a market for lemons.

Statutory rules on the monitoring and enforcement function of the proposed small public limited-liability company would have many potentially conflicting objectives. On one hand, it would be necessary to protect retail investors and other small shareholders to reduce their perceived risk exposure, increase the valuation of the company's shares, and reduce the cost of funding. On the other, all long-term shareholders will lose unless the business venture is successful. For this to happen, the people that run the company should have enough discretion to act in the interests of the firm and a legal duty to do so (sections 3.4.13 and 6.3.2). Moreover, shareholder objectives depend on the characteristics of the shareholder. Minority shareholders and controlling shareholders do not necessarily share the same objectives.[80] They do not provide identical services to the firm. It would be beneficial to empower shareholders to the extent that they provide good services.

Rules on monitoring and enforcement should, therefore, balance conflicting objectives. We propose the following design principles that largely relate to structural measures.

First, from the perspective of the issuer, the self-enforcement of the governance model[81] is more important than monitoring by all shareholders. Before the German company law reform of 1884, it was understood that small share-

79 For the rule-making duties of LTSE, see SEC Release No. 34 – 85828 (May 10, 2019), III.E.3. For the "regulatory functions" of traditional exchanges, see even Christiansen H, Koldertsova A (2009) p 212.

80 Hornstein GD (1950); Mäntysaari P (2010a) section 8.7.6 and Chapter 9.

81 Mäntysaari P (2012) Chapter 8.

holders do not make good monitors (section 2.4.5). Shareholders can nevertheless provide monitoring services that complement or contribute to the self-enforcement of the governance model. From the perspective of the firm, facilitating such monitoring services is a means to an end rather than an end itself.[82]

Second, it is possible to improve monitoring by using a two-tier board with the supervisory board monitoring the management board and voting on proposals submitted by the management board in important matters. A self-enforcing governance model with a clear separation of the monitoring function from the management function would make it less necessary for small shareholders to participate in monitoring. The two-tier model should be complemented by general statutory duties for members of the two boards. Under a two-tier board model, transparent company law duties even apply to top managers, whereas in a one-tier board model, the duties of top managers often fall outside the scope of company law and are based on less transparent contracts. Under a two-tier board model, board committees are not necessary for monitoring purposes, and the independence of individual board members is less relevant.[83] – The management board can be replaced by a managing director or directors (Geschäftsführer).

Third, to protect shareholders, a legal capital regime could be used to give shareholders a right to vote on the board's proposals in important transactions that influence their shares or the company's legal capital.[84] The required majority can either be low and increase management discretion (and the discretion of controlling shareholders), or high and make it easier to block decisions (and reduce the power of controlling shareholders). A rule requiring a simple majority

82 See even Macey JR, Kanda H (1990) p 1021: "To the extent that the enhanced monitoring available on organized exchanges lowers monitoring costs, firms will be willing to pay to have their shares listed on such exchanges."

83 Mäntysaari P (2005) pp 404 and 422. For corporate governance on traditional securities markets, see, for example, SEC Release No. 34 – 85828 (May 10, 2019), III.E.3: "LTSE has proposed corporate governance standards in connection with securities to be listed and traded on LTSE that are substantially similar to the corporate governance listing standards of other exchanges. Included in these standards are rules requiring a majority of directors on a listed issuer's board to be independent; rules and independence requirements relating to audit and compensation committees and the oversight of nominations; and rules requiring listed issuers to adopt codes of conduct applicable to all their directors, officers and employees."

84 For the legal capital regime, see Mäntysaari P (2010c) sections 5.3 and 5.4; Bebchuk LA (2005).

of votes cast could increase management discretion and the discretion of controlling shareholders as controlling shareholders vote for the board's proposal.[85]

Fourth, the use of just one or two classes of shares would increase transparency and help to improve the quality of monitoring and enforcement. This would not prevent the firm from using multiple classes of shares in the long term, because the firm would be able to use multiple classes of shares when it changes its company form. For example, the firm could change its company form to raise venture capital funding or enter regular stock markets.

Fifth, litigation should be restricted. Inherently high-risk business projects will not happen unless legal liability is limited. This has already contributed to the emergence of separate legal entities, the limited liability of shareholders, the business judgment rule, limitations on shareholders' direct action against people whose duties are owed to the company, and limitations on shareholders' derivative actions. In practice, board members in large companies have rarely been made liable for loss or damage caused to the company. If the same tests – and the business judgment rule – were applied in the high-risk environment of start-ups, growth firms, technology firms, and digital economy, the actual exposure of board members to legal liability would perhaps remain sufficiently low. Shareholder action can nevertheless hamper the business of the firm and increase costs even where the action is groundless or bound to fail. It would, therefore, be necessary to reduce minority shareholders' opportunities to bring legal proceedings against board members or the company.[86]

Sixth, small public limited-liability companies should be monitored by financial supervision authorities. For example, the SEC explained the duties of an exchange in a 2019 release "In the Matter of the Application of Long Term

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85 Compare the proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Chapter V: "The shareholders of the SPE enjoy a high degree of freedom in determining the internal organisation of the SPE, subject to the Regulation. Article 27 provides a non exhaustive list of the decisions which must be taken by shareholders. The articles of association must set out the required majority and quorum for voting subject to Article 27 which provides that certain of these decisions require a qualified majority (i.e., at least 2/3 of the voting rights of the SPE, but the articles may provide for a greater majority, e.g. 3/4) … All decisions which are not listed in the Regulation or in the articles of association fall under the competence of the SPE's management body which is responsible for running the company."

86 See also the proposal for a Council Regulation on the statute for a European private company, COM(2008) 396 final, Chapter V: "The Regulation imposes on directors the duty of acting in the best interests of the company. Accordingly, directors' duties are owed to the SPE and may only be enforced by the company. The Regulation does not give individual shareholders or creditors the right to directly sue the members of the management body."

Stock Exchange, Inc. for Registration as a National Securities Exchange".[87] Such duties should belong to public authorities in the absence of an exchange that could have a monitoring role. Moreover, criminalisations can help to reduce the risk of fraud and abuses.

9.14 Change of Company Form and Conclusions

The proposed small public limited-liability company is designed as a tailor-made company form for small firms that choose to have publicly-traded shares. The proposed company form goes hand in hand with the use of a microexchange.

The proposed company form would not necessarily be the first company form of the firm. It could be followed by a traditional company form when the firm chooses a listing on a traditional exchange, is taken over, or goes private. The firm's preferences may change over time.[88] For these reasons, it should be made easy for firms to opt in the regulatory regime for small public limited-liability companies, and to opt out by choosing another company form.

It seems possible to develop design principles that are aligned with the particular interests of such firms. The "smorgasbord" of these design principles could to some extent even be used as a model for a general company law reform.

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87 SEC Release No. 34 – 85828 (May 10, 2019), III.D.

88 See, for example, Macey JR, O'Hara M (2005) p 576 distinguishing between firms' preferences for regulation before and after the issuing of shares to the public.

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10 Conclusions

It is often said that there is too little market competition. At the same time, it is customary to assume that financial intermediaries are vital for the effective functioning of capitalism. In this book, it is argued that financial intermediaries benefit from a regulatory framework that effectively shields financial intermediation as an industry from competition and enables financial intermediaries to extract rents at the cost of retail investors, firms, public stock markets, and society as a whole. A regulatory framework designed with the interests of financial intermediaries in mind has kept the number of companies with publicly-traded shares too low, contributed to a shift from public stock markets to private markets, and increased financial polarisation.

A much larger number of companies with publicly-traded shares would be needed to rescue public stock markets and also to address the vast gap between pension savings and promised pension benefits. Moreover, retail investors' direct share ownership and people's capitalism are proposed as ways to increase competition and reduce the growth of financial inequalities.

We have studied ways to increase the number of companies with publicly-traded shares and retail investors' direct share ownership. Because of powerful societal and economic trends, it will be very difficult to reach such goals. However, it would be possible to improve the current regulatory regime for listed companies and to create an alternative regulatory regime based on regulatory dualism.

The concrete actions proposed in this book mean the use of three kinds of design principles. Policy principles lay down the values. Strategic design principles set out regulatory actions in broad terms. Operational design principles are intended to be applied at a concrete level. The proposed design principles indicate, by their very existence, that it is not necessary to design the regulatory framework primarily for the benefit of financial intermediaries. It is possible to imagine alternatives that might benefit society more.

Improving the existing regulatory regime. States can and should improve the existing regulatory regime.

The most fundamental issue is how to increase the number of good firms. This will require more than changes in company and securities law: "[T]he primary issue is not how to get companies to market, which may merely create a false supply, but how to create a regulatory and market environment that fosters growth in small companies."[1]

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1 Rose P, Solomon SD (2016) p 127.

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In any case, company law should preferably distinguish between the firm (das Unternehmen, l'entreprise), the legal entity, and shareholders. The interests of the company should be interpreted as the interests of the firm. Company law should primarily be aligned with the interests of the firm rather than the interests of shareholders or other stakeholders. This is not revolutionary in the light of the fact that the notion of the firm is well-established in continental European company law.

The principal-agent theory should be disconnected from legal notions of English common law. For the purposes of company law, the most important principal of the principal-agent theory should be the firm.[2] Over-reliance on public disclosures should be replaced by increased reliance on structures, in particular by the separation of functions and by mixed monitoring. Monitoring by short-term shareholders should be replaced by a governance model that builds on self-enforcement and facilitates innovation.

Securities law and stock exchange law can be changed to reduce the direct and indirect costs of a stock exchange listing for the firm. Again, regulation should be aligned with the interests of the issuer-firm rather than with the interests of short-term shareholders or financial intermediaries.

Any form of start-up funding will help. Angel funding, venture capital, and crowdfunding can contribute to a more dynamic and prosperous economy in the long run. But the participation of venture capital tends to keep firms private. Successful growth firms do not need a stock exchange listing for funding purposes in today's markets. There should be a viable alternative to venture capital.

It should also be made easier for successful firms to enter public stock markets. At the moment, the direct and indirect costs of a stock exchange listing can be too high for firms that want to prevail in competition in the long run. On one hand, the decline in the number of companies with publicly-traded shares may indicate that traditional stock exchanges and listings have become outdated. On the other, the popularity of SPACs indicates that the process can be simplified and made more flexible for firms.

Creating an alternative regulatory regime. While incremental improvements are necessary for the evolution of the existing regulatory regime, they do not seem to be enough to cure the most fundamental problems. States should therefore consider more radical changes to the regulation of companies and stock markets. In practice, this would require regulatory dualism.

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2 For the agency costs of debt from the perspective of the lender-firm, see Mäntysaari P (2010c) pp 16 – 17.

States should apply regulatory dualism and create an alternative regulatory regime for the issuing of shares to retail investors and for public trading in shares. This would require many legislative actions and steps.

The first step should be to limit and reduce the scope of the traditional regulatory regime in order to leave more room for the development of an alternative to the current financial intermediation industry. In practice, this would also mean rethinking the policy of creating a "level playing field" for all market participants. The policy of creating a "level playing field" can reduce competition and facilitate rent-seeking by preventing potential inter-industry competition. A "level playing field" means that all players are forced to play the same game without any competition between alternative games.

The second step should be to facilitate alternative direct equity investment regimes. This requires a large number of concrete legislative changes.

For example, we propose ways to make it easier for retail investors to invest in existing foreign stocks directly ranging from limiting the scope and extraterrorial effect of securities laws to the mutual recognition of investor protection regimes. The mutual recognition of investor protection regimes could increase retail investors' direct cross-border investment. There should be a transatlantic stock market for retail investors in order to give retail investors more choice.

Moreover, we propose a new kind of marketplace as an alternative to stock exchanges for trading in the shares of SMEs and growth companies. The proposed microexchange would be a simple marketplace for trading in the shares of one issuer only. The microexchange would belong to the issuer, but it should be made possible for the firm to outsource many of the trading venue's functions. The necessary technology could in practice be provided as a service by various competing operators of fintech platforms. Fintech would even help to combine many microexchanges at the retail investor level and create the experience of a bigger market. We propose a particular company form – the small public limited-liability company – for firms that want to use the microexchange.

The microexchange might help to move trading in shares from centralised stock exchanges to decentralised microexchanges and centralised fintech platforms. With some luck, this could help to increase the number of companies with publicly-traded shares and enable retail investors to participate in value creation in more firms.

The availability of microexchanges could provide a new way to facilitate retail investors' direct investment. A simple marketplace for secondary trading could help retail investors to participate in the equity funding of companies at an earlier stage, provide early equity investors an exit, and postpone the point in time when a growth firm needs to turn to venture capital investors or is

sold in a trade sale. Such issuers might also become eligible to a traditional stock exchange listing.

Jobs and savings. Households will not be able to invest in shares unless they have money to spare. People need employment opportunities and decent wages. They need affordable education and healthcare. There should be social security and a mandatory pension system as back-up systems. To make this possible, a better company law regime should foster the interests of firms and increase the number of good firms. Moreover, there should be better investor education for all. Since financial literacy is a public good, investor education should start in schools.

The method. The chosen goals and the work process – a single-author monograph based on a holistic perspective – have influenced the findings. It would not have been possible to do this in a single peer-reviewed article published in a mainstream journal. The results indicate that stock exchange law, company law, and securities law should be studied as a whole, comparatively, and over a longer time period in order to understand complex issues of market organisation and to find ways to address them.

Behind the method of this book is a theory according to which parties as rational actors try to use legal tools and practices to reach their objectives. Such a theory seems to reflect corporate and market practice. The book started with the choice of value-based purposes for the study (Chapter 1). The first part of the book was intended as a qualitative historical study of regulatory *technê* with scientific ambitions (Chapters 2–5). It was also a way to anchor the fundamentally value-based choices of the second part of the book in scientific research. The second part was intended as *technê* and as an exercise in what could be "practical wisdom" in the regulation of people's capitalism (Chapters 6–9). The second part started with the choice of values and was followed by a study of design principles for reaching the value-based purposes of the book (Chapter 6). The second part would not have been a rational and systematic exercise in how to reach goals without the choice of the underlying values and goals.

The fact that this book project could result in many proposals could also indicate that legal science can and should produce potential answers to major societal problems. In fact, "the rules of the game" discussed in this book consist of very complex legal frameworks that cannot be properly understood without a holistic research approach and the study of a broad range of legal tools and practices. Since the problems are caused by a large number of detailed norms, there will be no reasonable answers without a large number of relatively concrete and detailed proposals about how to change them.