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-

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

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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 innotion 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-

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

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]

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

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;

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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

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.

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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

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.

References

Accenture (2014) The Rise of Fintech: New York's Opportunity for Tech Leadership. Partnership Fund for New York City

AFT (2017) The Big Squeeze: How Money Managers' Fees Crush State Budgets and Workers' Retirement Hopes. A report by the American Federation of Teachers

Andrews D, Criscuolo C, Gal PN (2015) Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries. The Future of Productivity: Main Background Papers. OECD

Andrews D, Criscuolo C, Gal PN (2016) The Global Productivity Slowdown, Technology Divergence and Public Policy: A Firm Level Perspective. Brookings Institute, Hutchins Center Working Paper 24, September 2016

Appelbaum E, Batt R (2014) Private Equity at Work: When Wall Street Manages Main Street. Russell Sage Foundation, New York

Atkinson AB (2015) Inequality: What Can Be Done? Harvard University Press, Cambridge, Mass.

Auerbach J, Hayes SL (1986) Investment Banking and Diligence: What Price Deregulation? Harvard Business School Press, Boston, Mass.

Auten G, Splinter D (2019) Top 1 Percent Income Shares: Comparing Estimates Using Tax Data. AEA Papers and Proceedings 109:307–311

Autor DH, Katz LF, Kearney MS (2006) The Polarization of the U.S. Labor market. American Economic Review Papers and Proceedings 96(2):189–194

Autor DH, Dorn D, Katz LF, Patterson C, Van Reenen J (2020) The Fall of the Labor Share and the Rise of Superstar Firms. The Quarterly Journal of Economics 135(2):645—709

Basel Committee on Banking Supervision (2011) Basel III: A global regulatory framework for more resilient banks and banking systems. December 2010 (rev June 2011). Bank for International Settlements, Basel

Basel Committee on Banking Supervision (2013) Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement. Bank for International Settlements, Basel

Baskin JB, Miranti PJ Jr (1997) A History of Corporate Finance. Cambridge University Press, Cambridge and New York

Batt R, Appelbaum E (2013) The Impact of Financialization on Management and Employment Outcomes. Upjohn Institute Working Paper 13–191. W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan

BETTER FINANCE for all (2014) Pension Savings: The Real Return. A Research Report. The European Federation of Financial Services Users, Brussels

Bazot G (2014) Financial Consumption and the Cost of Finance: Measuring Financial Efficiency in Europe (1950–2007). PSE Working Papers n°2014–17. halshs-00986912

Berle AA (1968) Property, Production and Revolution: A Preface to the Revised Edition. In: Berle AA, Means GC, The Modern Corporation and Private Property. Transaction Publisheds, New Brunswick and London

Bikhchandani S, Sharma S (2000) Herd Behavior in Financial Markets: A Review. IMF Working Paper WP/00/48
Blair MM, Stout LA (1999) A Team Production Theory of Corporate Law. Virginia Law Review 85:247 – 328
Bork RH (1978) The Antitrust Paradox: A Policy at War with Itself. Basic Books, New York
Brandeis LD (1914) Other People's Money: And How the Bankers Use It. Frederick A. Stokes Company, New York
Bratton WW (2001) Berle and Means Reconsidered at the Century's Turn. Journal of Corporation Law 26(3):737—770
Brynjolfsson E, McAfee A (2014) The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W. W. Norton & Company, New York and London
Caballero RJ, Farhi E, Gourinchas PO (2008) Financial Crash, Commodity Prices, and Global Imbalances. Brookings Papers on Economic Activity, Fall 2008, pp 1—55
Cartwright BG (2007) Speech by SEC Staff: The Future of Securities Regulation. University of Pennsylvania Law School Institute for Law and Economics, Philadelphia, Pennsylvania, October 24, 2007
Cecchetti SG, Kharroubi E (2012) Reassessing the impact of finance on growth. BIS Working Paper No 381, Bank for International Settlements, July 2012
Chandler AD Jr (1977) The Visible Hand: The Managerial Revolution in American Business. The Belknap Press, Cambridge, Mass.
Clayton J (2019) SEC Chairman Jay Clayton, Remarks to the Economic Club of New York, 9 September 2019
Coase RH (1937) The Nature of the Firm. Economica, New Series 4(16):386 – 405
Coase RH (1988) The Firm, The Market, and The Law. University of Chicago Press, Chicago and London
Cotton Nessler NC, Davis GF (2012) Stock Ownership, Political Beliefs, and Party Identification from the "Ownership Society" to the Financial Meltdown. Accounting, Economics, and Law 2(2), Article 6
Darwin C (1859) On the Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life. John Murray, London
Davies H (2015) Can Financial Markets Be Controlled? Polity, Cambridge
Davis GF, Cotton NC (2007) Political Consequences of Financial Market Expansion: Does Buying a Mutual Fund Turn You Republican? Presented at the American Sociological Association Annual Meetings, New York, August
de Fontenay E (2017) The Deregulation of Private Capital and the Decline of the Public Company. Hastings Law Journal 68:445 – 502
De Loecker J, Eeckhout J, Unger G (2019) The Rise of Market Power and the Macro-economic Implications. NBER Working Paper, November 2019
Demirguc-Kunt A, Levine R (2009) Finance and Inequality: Theory and Evidence. Annual Review of Financial Economics, Annual Reviews 1(1):287 – 318
Dilliard I (1941) Mr. Justice Brandeis: Great American: Press Opinion and Public Appraisal. Modern View Press, St. Louis
Doidge C, Karolyi GA, Stulz RM (2017) The U.S. Listing Gap. Journal of Financial Economics 123(3):464—87
Edwards JR (2019) A History of Corporate Financial Reporting in Britain. Routledge, New York and Milton Park

Egan M, Matvos G, Seru A (2017) The Market for Financial Adviser Misconduct. Journal of Political Economy 127(1):233–295
Engelen E, Grote MH (2009) Stock exchange virtualisation and the decline of second tier financial centres: the cases of Amsterdam and Frankfurt. Journal of Economic Geography 9(5):679–696
Epstein G (2005) Financialization and the World Economy. Edward Elgar, Cheltenham
European Central Bank (2016) The Household Finance and Consumption Survey: results from the second wave. Household Finance and Consumption Network. Statistics Paper Series No 18, December 2016
European Parliament (2017) Potential Impact of Financial Innovation on Monetary Policy. Directorate-General for Internal Policies. Policy Department A: Economic and Scientific Policy, May 2017
Executive Office of the President of the United States (2016) Artificial Intelligence, Automation, and the Economy. December 2016
Fergus D (2018) Land of the Fee: Hidden Costs and the Decline of the American Middle Class. Oxford University Press, Oxford
Ferrarini G, Saguato P (2014) Regulating financial market infrastructures. ECGI Working Paper Series in Law, 259/2014. European Corporate Governance Institute (ECGI), Brussels
Ferrell A, Morley JD (2018) Chapter 7. The Regulation of Intermediaries. In: Fox MB, Glosten LR, Greene EF, Patel MS (eds) Securities Market Issues for the 21st Century. Prepared in connection with The New Special Study a project of Columbia Law School & Columbia Business School's Program in the Law and Economics of Capital Markets. Independently published, pp 313–384
Financial Conduct Authority (2016) Asset Management Market Study: Interim Report. MS 15.2.2, November 2016
Finnerty J (1988) Financial Engineering in Corporate Finance: An Overview. Financial Management 17:14–33
Finnerty J (1992) An Overview of Corporate Securities Innovation. Journal of Applied Corporate Finance 4:23–39
Fioravanti SF, Gentile M (2011) The impact of market fragmentation on European stock markets. CONSOB Working Paper, No 69, July 2011
Fleischer V (2008) Two and Twenty: Taxing Partnership Profits in Private Equity Funds. New York University Law Review 83(1):1–59
Fox MB, Glosten LR, Greene EF, Patel MS (eds) (2018) Securities Market Issues for the 21st Century. Prepared in connection with The New Special Study a project of Columbia Law School & Columbia Business School's Program in the Law and Economics of Capital Markets. Independently published
Fox MB, Glosten LR, Rauterberg GV (2019) The New Stock Market: Law, Economics, and Policy. Columbia University Press, New York and Chichester
François P, Lemercier C, Reverdy T (2015) L'entreprise et ses actionnaires. Revue française de Sociologie 56(3):501–524
Freeman RB (2018) Ownership when AI robots do more of the work and earn more of the income. Journal of Participation and Employee Ownership 1(1):74–95
Friedman M (1962) Capitalism and Freedom. University of Chicago Press, Chicago
Gambacorta L, Yang J, Tsatsaronis K (2014) Financial structure and growth. BIS Quarterly Review, March 2014, pp 21–35

Gilens M, Page BI (2014) Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens. Perspectives on Politics 12(3):564 – 581
Gilson RJ (2003) Engineering a Venture Capital Market: Lessons from the American Experience. Stanford Law Review 55:1067 – 1103
Gilson RJ, Black BS (1998) Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets. Journal of Financial Economics 47:243 – 277
Goos M, Manning A (2007) Lousy and Lovely Jobs: The Rising Polarization of Work in Britain. The Review of Economics and Statistics 89:118 – 133
Gompers PA, Kaplan SN, Mukharlyamov V (2020) Private Equity and Covid-19. NBER Working Paper No. w27889, October 2020
Group of Thirty (2019) Fixing the Pensions Crisis: Ensuring Lifetime Financial Security. Washington, D.C.
Grullon G, Larkin Y, Michaely R (2019) Are US Industries Becoming More Concentrated? Review of Finance 23(4):697 – 743
Guvenen F, Kambourov G, Kuruscu B, Ocampo-Diaz S, Chen D (2019) Use it or Lose it: Efficiency Gains from Wealth Taxation. NBER Working Paper No. w26284, September 2019
Hazen TL (2009) Securities Regulation: Cases and Materials. Eight Edition. West Publishing Co., St. Paul, Minnesota
Heck P (1914) Gesetzesauslegung und Interessenjurisprudenz. Archiv für die civilistische Pracis 112:1 – 318
Heminway JM (2017) Selling Crowdfunded Equity: A New Frontier. Oklahoma Law Review 70(1):189 – 213
Heyman F, Norbäck PJ, Persson L (2018) Who Creates Jobs and Who Creates Productivity? Small versus Large versus Young versus Old. Economic Letters 164(3):50 – 57
Hill J (2021) UK Listing Review. Chairman Jonathan Hill, 3 March 2021
International Monetary Fund (2012) Chapter 4. Changing Global Financial Structures: Can They Improve Economic Outcomes? In: Global Financial Stability Report: Restoring Confidence and Progressing on Reforms. October 2012, pp 141 – 176
Jia-Ming Z, Morss ER (2005) The Financial Revolutions of the Twentieth Century. In: Chandler AD, Mazlish B (eds) Leviathans: Multinational Corporations and the New Global History. Cambridge University Press, Cambridge, pp 203 – 217
Kahle KM, Stulz RM (2017) Is the US Public Corporation in Trouble? Journal of Economic Perspectives 31(3):67—88
Kajanoja L (2017) Kasvua ilman eriarvoisuutta? Kansantaloudellinen aikakauskirja 113(1):22 – 41
Kenney M, Zysman J (2019) Unicorns, Cheshire cats, and the new dilemmas of entrepreneurial finance. Venture Capital 21(1):35 – 50
King RG, Levine R (1993) Finance and Growth: Schumpeter Might Be Right. The Quarterly Journal of Economics 108(3):717 – 737
Kitch EW (2005) The Simplification of the Criteria for Good Corporate Law or Why Corporate Law Is Not as Important Anymore. Berkeley Business Law Journal 2(1):35 – 38
Lafer G (2017) The One Percent Solution: How Corporations Are Remaking America One State at a Time. ILR Press, an Imprint of Cornell University Press, Ithaca and London
La Porta R, Lopez-de-Silanes F, Shleifer A (2006) What Works in Securities Laws? The Journal of Finance 61(1):1—32

Lenin VI (1917) Imperialism, the highest stage of capitalism: A popular outline. First published in mid-1917 in pamphlet form, Petrograd. Marxists Internet Archive.
Lerner J, Tufano P (2012) The Consequences of Financial Innovation: A Counterfactual Research Agenda. In: Lerner J, Tufano P (eds) The Rate and Direction of Inventive Activity Revisited. University of Chicago Press, Chicago, pp 523–578. Published even 2011 in Annual Review of Financial Economics 3:41–85
Lewis M (2015) Flash Boys: A Wall Street Revolt. W.W. Norton & Company, Inc., New York
Lindsey B, Teles SM (2017) The Captured Economy: How the Powerful Enrich Themselves, Slow Down Growth, and Increase Inequality. Oxford University Press, New York
Macey JR, O'Hara M (2005) From Markets to Venues. Securities Regulation in an Evolving World. Stanford Law Review 58:563–599
Mäntysaari P (2010a) The Law of Corporate Finance: General Principle and EU Law. Volume I: Cash Flow, Risk, Agency, Information. Springer, Berlin Heidelberg
Mäntysaari P (2012) Organising the Firm: Theories of Commercial Law, Corporate Governance and Corporate Law. Springer, Berlin Heidelberg
Manne HG (1965) Mergers and the Market for Corporate Control. The Journal of Political Economy 73(2):110–120
Mbaye S, Badia MM, Chae K (2018) Bailing Out the People? When Private Debt Becomes Public. IMF Working Paper No. 18/141, June 2018
McKinsey Global Institute (2013) Financial globalization: Retreat or reset? By Susan Lund, Toos Daruvala, Richard Dobbs, Philipp Härle, Ju-Hon Kwek, and Ricardo Falcón. McKinsey & Company
Merton RC, Bodie Z (2005) Design of Financial Systems: Towards a Synthesis of Function and Structure. Journal of Investment Management 3(1):1–23
Mishkin FS, Eakins SG (2012) Financial markets and institutions. Seventh Edition. Pearson, Harlow
Muro M (2016) Manufacturing Jobs Aren't Coming Back. MIT Technology Review, January/February 2017
Nadler R (1999) The Rise of Worker Capitalism. Policy Analysis, No. 359. Cato Institute, Washington D.C.
Odendahl C, Springford J (2021) Why Europe should spend big like Biden. Centre for European Reform Bulletin, Issue 137, April/May
OECD (2015a) In It Together: Why Less Inequality Benefits All. OECD Publishing, Paris
OECD (2016) Automation and Independent Work in a Digital Economy. Policy Brief on the Future of Work. May 2016
Offer A, Söderberg G (2016) The Nobel Factor: The Prize in Economics, Social Democracy, and the Market Turn. Princeton University Press, Princeton
Oliver Wyman (2012) The Real Financial Crisis: Why Financial Intermediation is Failing
Ostrom E (2005) Understanding Institutional Diversity. Princeton University Press, Princeton
Ostrom E (2010) Beyond Markets and States: Polycentric Governance of Complex Economic Systems. Prize Lecture, December 8, 2009. In: Grandin K (ed) La Prix Nobel. Nobel Foundation, Stockholm, pp 408–444 and American Economic Review 100(3):641–672
Parisian E, Bhatti S (2015) All That Glitters Is Not Gold: An Analysis of U.S. Public Pension Investments in Hedge Funds. Roosevelt Institute, June 2015
Philippon T (2015) Has the US Finance Industry Become Less Efficient? On the Theory and Measurement of Financial Intermediation. American Economic Review 105(4):1408–1438

Philippon T, Reshef A (2012) Wages and Human Capital in the U.S. Finance Industry: 1909 – 2006. The Quarterly Journal of Economics 127(4):1551 – 1609
Philippon T, Reshef A (2013) An International Look at the Growth of Modern Finance. Journal of Economic Perspectives 27(2):73 – 96
Piketty T (2014) Capital in the Twenty-first Century. The Belknap Press of Harvard University Press, Cambridge, Mass.
Polanyi K (1944/2001) The Great Transformation: The Political and Economic Origins of Our Time. Farrar & Rinehart, New York. Second edition 2001, Beacon Press, Boston. Foreword to second edition by Joseph E. Stiglitz, Introduction to second edition by Fred Block
Posner RA (1978) The Chicago School of Antitrust Analysis. University of Pennsylvania Law Review 127(4):925 – 948
Rajan RG, Zingales L (2003) The great reversals: the politics of financial development in the twentieth century. Journal of Financial Economics 69:5 – 50
Reamer N, Downing J (2016) Investment: A History. Columbia University Press, New York and Chichester
Reich RB (2015) Saving Capitalism: For the Many, Not the Few. Penguin Random House, New York
Saez E (2017) Income and Wealth Inequality: Evidence and Policy Implications. Contemporary Economic Policy 35(1):7 – 25
Sahlman WA (1990) The Structure and Governance of Venture-Capital Organizations. Journal of Financial Economics 27(2):473 – 521
Schumpeter JA (1911) The Theory of Economic Development. Harvard University Press, Cambridge, Mass.
Smith A (1776) Inquiry into the Nature and Causes of the Wealth of Nations. W. Strahan and T. Cadell, London
Sobel R (1977) Inside Wall Street: Continuity and Change in the Financial District. W. W. Norton & Company, Inc., New York
Song J, Price DJ, Guvenen F, Bloom N, von Wachter T (2019) Firming Up Inequality. The Quarterly Journal of Economics 134(1):1—50
Special Study of Securities Markets (1963a) Report of Special Study of Securities Markets of the Securities and Exchange Commission. 88th Congress, 1st Session. House Document No. 95, Pt. 1. U.S. Government Printing Office, Washington
Stansbury A, Summers LH (2020) The Declining Worker Power Hypothesis: An Explanation for the Recent Evolution of the American Economy. NBER Working Paper No. 27193, May 2020
Stigler GJ (1971) The Theory of Economic Regulation. Bell Journal of Economics 2(1):3 – 21
Stiglitz JE (2013) The Price of Inequality. Paperback edition. Penguin Books, Great Britain
Stiglitz JE (2015) Rewriting the Rules of the American Economy: An Agenda for Growth and Shared Prosperity. Version 1.1, Roosevelt Institute, May 2015
Stiglitz JE (2020) People, Power and Profits: Progressive Capitalism for an Age of Discontent. Paperpack edition. W. W. Norton & Company, Inc., New York
Stockhammer E (2008) Some stylized facts on the finance-dominated accumulation regime. Competition and Change 12:184 – 202
Sunstein CR, Vermeule A (2015) Libertarian Administrative Law. University of Chicago Law Review 82(1):393 – 473

The Kay Review (2012) The Kay Review of UK Equity Markets and Long-term Decision Making. Final Report, July 2012

Traflet JN (2013) A Nation of Small Shareholders: Marketing Wall Street after World War II. The Johns Hopkins University Press, Baltimore

UNDP (2017) Financing Solutions for Development – Crowdfunding

UNDP (2018) Financing the 2030 Agenda: An Introductory Guidebook for UNDP Country Offices

Useem M (1996) Investor Capitalism: How Money Managers Are Changing the Face of Corporate America. BasicBooks, New York

Walker DA (2001) A factual account of the functioning of the nineteenth-century Paris Bourse. European Journal of the History of Economic Thought 8(2): 186—207

Weber M (1922) Wirtschaft und Gesellschaft. Grundriß der verstehenden Soziologie. Verlag von J. C. B. Mohr (Paul Siebeck), Tübingen

Webber D (2018) The Rise of the Working-Class Shareholder: Labor's Last Best Weapon. Harvard University Press, Cambridge, Mass. and London, England

Weild D, Kim E, Newport L (2013) Making Stock Markets Work to Support Economic Growth: Implications for Governments, Regulators, Stock Exchanges, Corporate Issuers and their Investors. OECD Corporate Governance Working Papers No. 10, OECD Publishing, Paris

Williams JC (2017) White Working Class: Overcoming Class Cluelessness in America. Harvard Business Review Press, Boston, Mass.

Williamson OE (1979) Review of The Antitrust Paradox: A Policy at War with Itself by Robert H. Bork. The University of Chicago Law Review 46:526—531

Willman P, Pepper A (2020) The role played by large firms in generating income inequality: UK FTSE 100 pay practices in the late twentieth and early twenty-first centuries. Economy and Society 49(4):516 – 539

Wu T (2018) The Curse of Bigness: Antitrust in the New Gilded Age. Columbia Global Reports, New York

Gao X, Ritter JR, Zhu Z (2013) Where Have All the IPOs Gone? Journal of Financial and Quantitative Analysis 48(6):1663 – 1692