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Financialization made in Germany – a review

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Financialization made in Germany – a review

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Abstract:

This article examines the spread of financialization in Germany before the financial crisis. It provides an up-to date overview on the literature on financialization and reviews which of the phenomena typically associated with financialization have emerged in Germany. In particular, the article aims to clarify how the prevailing institutional structure and its changes had contributed to or had countervailed the spread of financialization and how it had shaped the specific German variant of financialization. For this end, it combines the rich literature on Germany's institutional structure with the more macroeconomic oriented literature on financializaton. With the combination of those different perspectives the article sheds light on the reasons for the spread of financialization and the specific forms it has taken in Germany.

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1 Introduction

During the last thirty years the German economy has experienced major changes. At the macroeconomic level we saw a slowdown in growth and an enormous surge in export surpluses, most pronounced in the 2000s. At the same time society became more unequal: for functional income distribution we see a long-term decline in the labor income share and indicators for personal income inequality have followed an upward trend (Detzer et al. 2017, chapters 15-16). These macroeconomic developments were accompanied by important historical events and institutional transformations: most prominently the reunification of Germany in 1990, the introduction of the Euro in 1999 and controversial labor market reforms in 2002 and 2003. Without comparable public attention also a range of transformative changes in the sphere of financial markets took place. The large German financial institutions reduced their engagement in the German company network (*Deutschland AG)*, a key institutional feature of post-war Germany, when they changed their focus from commercial towards investment banking (Höpner and Krempel 2005). In parallel, regulatory changes were made to increase the role of financial markets in the historically bank-based German system and to reform corporate governance. While those alterations had already started in the 1980s, the most significant changes were implemented after the mid-1990s. International and EU harmonization attempts have led to further reforms in key areas of financial regulation (e.g. prudential rules for banks) and related areas (e.g. accounting or corporate law) (Deeg 1999: 87–95; Detzer and Herr 2014). These legal and institutional changes were followed by a rise in size and activity of financial markets, by an enormous growth of financial institutions and by the arrival of new financial actors, but also by increased financial activity of non-financial firms in the 1990s and early 2000s. (Detzer et al. 2017, chapter 3; Hardie and Howarth 2013a; van Treeck et al. 2007).

With this dynamic, Germany largely fits a pattern that has been observed in countries worldwide. Starting in the USA (and the UK) and later followed by a range of other countries, finance has increased its importance substantially and occupies a much more prominent role in many areas of economic and social life. A vibrant literature is discussing this phenomenon under the heading of 'financialization', documenting quantitative and qualitative changes in national and international financial systems, and trying to analyze their effect on the other sectors of the economy, such as industrial firms or households, and for the macroeconomy at large.[1] A shortcoming of the literature on financialization is pointed out by Nölke (2009), who argues that the existing literature so far often misses a specific institutional and national perspective and that many of the observed phenomena can only be understood by including such a perspective.

The following article will take this criticism into account and combine the rich literature on Germany's institutional structure with an evaluation of the degree of financialization in Germany and the specific form it took. First, an overview of the historical discussion on the role of finance in broader economic development is given. Here some theoretical and empirical contributions will be reviewed to show that until now the role of finance in economics has been a controversial issue. Recent empirical findings indicate that finance may play a dual role and can support economic growth but can also be detrimental to it. This insight leads our discussion to financialization, which documents a variety of channels through

[1] See for example Epstein (2005a), Krippner (2005), Orhangazi (2008b) or Palley (2013). For case studies on financialization in specific countries see Hein et al. (2016).

which an increase in the role of finance, as has been observed since the late 1970s, can undermine a country's growth performance. After a general overview of financialization and its characteristics in section 3, we will focus on the case of Germany in section 4. Here we will briefly review the relevant characteristics of the German financial and economic system after the Second World War. We will then look at the main drivers of changes in the institutional and legal structure which were conducive to financialization. In section 4.3 we will than use the framework established in section 3 to examine which of the phenomena associated with financialization can be observed in Germany and how these have affected the structure of the German economic system. We will focus our analysis on Germany before the financial crisis, because the crisis triggered major changes, the effects of which cannot yet be fully comprehended and which deserve separate and more comprehensive examination.

2 The role of finance in economic theory and the empirical discussion

Discussions about the role of finance for economic development have been a long-standing issue in economic literature, going back to classical economists like Richard Cantillon, David Hume and Henry Thornton (Stolbov 2013). Also, in the first half of the 1840s finance and money were concerns in the disputes between the followers of the so-called Currency School and the Banking School (Eltis 2001). However, Walter Bagehot (1873) was one of the first who directly related processes in the financial sphere to activities in the real sector (Stolbov 2013). Since those early contributions, views within the academic discussion on the role of finance have been very diverse. Some economists, like Robert Lucas (1988: 6), regard the role of finance as "very badly overstressed in popular and even much professional discussion". Similarly, Joan Robinson (1952: 86) assigns finance a secondary role, when she states: "where enterprise leads finance follows". At the other extreme, some economists like Merton Miller (1998: 14) see financial markets' contribution to economic growth as a proposition "too obvious for serious discussion". While Miller seems to regard the role of finance as largely positive, an alternative view is taken by a range of economists who stress the dual role of finance. Those include for example Joseph Schumpeter ([1912] 1987) or Hyman Minsky ([1982] 2016), who argue that finance can be an important ingredient for growth, but can also lead to crisis and a slow-down of economic development for many years. Karl Marx ([1894] 1964) also acknowledged the importance of finance when he wrote extensively on the role of financial capital and credit in accelerating and destabilizing the processes of production and accumulation. The role of finance is acknowledged by many writers in the Marxian tradition, in particular by Rudolf Hilferding ([1910] 1955) in *Das Finanzkapital*, where he analyses the transformative role of financial capital for industry and the economy as a whole. Even though the role of finance is not systematically investigated in John Maynard Keynes' ([1936] 1964) *General Theory of Employment, Interest and Money*, he acknowledges the dual role of financial markets when he warns of the dangers of speculation for enterprises. In the subsequent discussions of his work, however, he stresses the powerful role of finance and its necessity for economic expansion.[2] However, after the great depression of the 1930s, most of the economics profession regarded finance rather as a sideshow to real economic development and little attention was paid to it (Goldsmith 1959; Gurley and Shaw 1955). Renewed interest was sparked by the publications of John Gurley and Edward Shaw (1955), who criticized this 'comparative neglect of financial aspects' (Gurley and Shaw 1955: 515) in the discussion on

[2] See for example Keynes' answer to Professor Ohlin's critique in The Economic Journal in December 1937 (Keynes 1978: 215ff).

economic development and outlined a methodology for the integration of financial and growth aspects. A particular impetus was given by Shaw (1973) and Ronald McKinnon (1973), who both argued against what they called 'financial repression', a development model pursued in many countries at the time. They argued that strongly regulated financial markets in developing countries would hold back growth and on those grounds made their argument for financial liberalization. However, most of the works in this field lacked a sufficient amount of data to provide convincing evidence for the respective views (Sawyer 2014a).

A key work sparking the collection of empirical data on financial issues was Goldsmith (1969). The author presented indicators he deemed essential for analyzing the role of the financial sector in economic development. From the 1990s a substantially larger amount of comparable financial sector data was available, which led to more empirical research in this area. Starting with the seminal contribution by King and Levine (1993) literature has emerged trying to examine the effect of finance on growth. In addition, a discussion about the 'right' financial system evolved, which tries to provide evidence regarding whether a system based on intermediation through financial markets or through banks is superior.[3] In the beginning studies were mostly based on cross-sectional data, but due to problems with this approach other researchers used panel and time series data when available. Earlier research in this area seemed to assert the view that more finance was associated with more growth.[4] Demirgüç-Kunt and Levine (2001: 4) state that "[i]n particular, researchers have provided additional findings on the finance-growth nexus and have offered a much bolder appraisal of the causal relationship: firm-level, industry-level, and cross-country studies all suggest that the level of financial development exerts a large, positive impact on economic growth." Similarly, Levine (2005: 921) concludes from his reading of the literature that "[a] growing body of empirical analyses […] demonstrate a strong positive link between the functioning of the financial system and long-run economic growth." However, throughout their reviews the authors mention that the obtained results are subject to ample qualifications, criticism, and countervailing views. These include problems of causality, of the used variables representing financial system development, of institutional differences, etc. Ang (2008) and Hein (2005), taking into account these problems and raising additional issues with the conducted studies[5], doubt that – based on this research – much can be said about the relation between finance and growth, and in particular that policy recommendations can be based on it.

In retrospect this critical attitude seems to be justified. More recent empirical research necessitates a reevaluation of the finance-growth nexus. Some authors find in their studies diminishing returns to the

[3] A problem with this literature is that it is based on loanable funds theory, and that markets and banks are seen as performing similar intermediation services of channelling surplus funds (savings) from households to firms. If the idea of endogenous money is accepted, the roles of banks and markets are very different. Hein (2005) shows these differences in a monetary circuit model. Banks, which are, in contrast to markets, able to create credit and liquidity, play a key role in the income generation process, which in turn creates the necessary savings. Only at a second stage, markets are relevant in allowing savers to choose different forms of assets to hold the accruing savings. Following this view has a range of implications that broadens the questions of market- vs. bank-based finance considerably and which are often neglected in the design and interpretation of the empirical research.

[4] See Ang (2008), Demirgüc-Kunt and Levine (2001), and Levine (2005) for overviews of the literature.

[5] These are, for example, a potential non-linearity in the effect, a misunderstanding of the roles of markets and banks in economic systems, etc.

expansion of the financial sector for growth. Rousseau and Wachtel (2011) look at the periods from 1965 to 1989 and from 1990 to 2004 and find that in their data a positive relation between finance and growth has disappeared in the second period.[6] Others find an inverted U-shaped relationship, meaning that financial sector expansion is positively related to growth but becomes negative after a certain threshold is passed. This is partially related to the higher incidence of financial crises. However, the research also suggests that even in tranquil periods a negative effect of an over-expanded financial sector exists. Different explanations for this negative effect are provided by the authors, which will be discussed below (Arcand et al. 2015; Bezemer et al. 2014; Cecchetti and Kharroubi 2012; Cournède et al. 2015; Cournède and Denk 2015; da Silva et al. 2017; Demetriades and Rousseau 2016; Favara 2003; Gambacorta et al. 2014; Law and Singh 2014; Shen and Lee 2006; Tori and Onaran 2017).

As outlined in this section, the relationship between the size of the financial sector, often referred to as financial deepening, financial liberalization and economic growth has been discussed in theoretical and empirical debates for over a century now. The emerging empirical evidence initially seemed to support a positive relationship between financial development and economic growth. However, more recent empirical literature suggests that this relationship has weakened, or may even have reversed. The authors suggest some explanations for this changed relationship: early accounts argue that the financial service sector attracts human capital, which from a social point of view would be better employed in other parts of the economy (Sawyer 2014a; Tobin 1984). Others argue, for instance, that the additional returns from more financial depth are outweighed by higher costs of financial regulation (de la Torre et al. 2011), or that new forms of finance enabled by financial deregulation and innovation are different in character than traditional bank loans and may reduce credit quality (UNCTAD 2008). It is argued further that there is an important difference found in terms of the effects of intermediary activity performed by the financial sector and other activities such as proprietary trading or fee earning activities (Beck et al. 2014). Finally, some argue that credit has become increasingly available to households, so the composition of the provided credit may have changed. Hence, if one does not properly distinguish between household and business credit, results may be biased (Arcand et al. 2015; Beck et al. 2012). Sawyer (2014a) notes that the change in the relationship between finance and growth may result from the evolution of the financial sector which had occurred over the past three decades and which may be hindering investment and increase instability. The literature on 'financialization', which we will examine in the following section, systematically documents the enormous spread, diffusion, and evolution of finance over the past 30 to 40 years and examines its consequences for economic organization and development.

[6] Arcand et al. (2015) note that the finding of diminishing returns for datasets evaluating more recent time periods is also consistent with a negative relation between finance and growth after the financial sector has reached a certain size. They state "when a specification which omits the quadratic term is mis-specified, and the "true" relationship is indeed quadratic, the downward bias in the linear term will increase as more and more observations correspond to countries with particularly large financial sectors" (Arcand et al. 2015: 141).

3 The concept of financialization

The term 'financialization' is used to describe and explain a host of phenomena and trends observed in the period since the late 1970s.[7] Those are, for instance: an enormous increase in outstanding financial assets, in size and complexity of financial institutions and in financial turnover; increasing activity of non-financial corporations in financial markets and an increasing influence of financial markets on firms' activities; also the increasing importance of finance in everyday life, for example, the regular reports on stock market development in the news, but also the increasing dependence of households on financial market developments, e.g. for old age provisions or education. The encompassing nature of financialization is caught well when Dore (2008: 1) describes it as 'a bit like "globalization"—a convenient word for a bundle of more or less discrete structural changes in the economies of the industrialized world.' A prominent and widely used definition is the one by Gerald Epstein (2005b: 3) who refers to the phenomenon as "the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies".

3.1 Characteristics and effects of financialization

The literature has documented a large variety of characteristics, consequences and effects of financialization. While we will try to provide a comprehensive overview of the most important trends and observations, it should be kept in mind that the research on financialization has a strong emphasis on the USA and that financialization did not occur in every country at the same time, to the same degree or in exactly the same form. Rather it is shaped, influenced or altered by national institutions, as for example remarked upon by Brown et al. (Brown et al. 2017: 53): "Financialization spans the single global system but is highly variegated in nature, impact and response across regions and scales." Therefore, in the following subsections, we will not refer to any particular country, but try to give an overview about commonly accepted characteristics of financialization in the literature. However, for many of those it can be assumed that they have occurred in the USA in the period since the 1980s, unless indicated otherwise.

3.1.1 Financialization and the financial sector

The changes observed in the financial sector are quantitative as well as qualitative and closely interwoven with the deregulation and liberalization of the financial system itself (Sawyer 2014b). Looking at quantitative measures, one striking observation is the enormous expansion of financial assets and liabilities[8] in the economy as a whole. A main contributor to this is the financial sector, which has increased its balance sheet tremendously, and much of the observed increase results from intra-financial sector lending. At the same time, the financial sector has increased its weight in the economy in terms of value added, employment and also in terms of profits going to the financial sector (Epstein and Crotty 2013; Greenwood and Scharfstein 2013). These enormous increases are accompanied by an equally striking rise in financial trading in all types of products, particularly in derivatives (Iancu 2013).

[7] Even though some of those were already apparent earlier, according to Sawyer (2014b), there was a gear shift in the late 1970s/early 1980s in terms of quantity and quality of the observed phenomena.

[8] The ratio of global financial assets to GDP has risen in the order of three times between 1980 and 2007 (Brown et al. 2015).

The quantitative expansion of the financial sector was matched by many parallel qualitative changes, which include the arrival of new financial actors, the spread of new financial instruments and techniques and changes within traditional financial institutions. Even though in much of the traditional financial sector institutions grew significantly, in many countries a substantial part of the growth of the financial sector was driven by new financial actors such as investment, money market, hedge or private equity funds as well as by the increasing use of special purpose vehicles, etc. Those often less tightly regulated institutions are seen as a symptom as well as a driver of financialization (Stockhammer 2012a). In the USA, for example, the increasing competition by those non-bank financial actors was taken as a reason to further deregulate the traditional financial sector (D'Arista and Schlesinger 1993; Isenberg 2007).

Related to the arrival of these new actors is the emergence of parallel or shadow banking systems. The former describes the conduct of banking activities outside of the traditional banking system, for instance through chains of different actors. This was a phenomenon largely observed in the USA. The latter refers to banking activities, which are undertaken by banks but are moved off balance sheet and out of regulatory control, for example with the help of special purpose vehicles.[9] While often these vehicles were regarded as independent of the sponsoring banks, through mechanisms like guaranteed credit lines, large amounts of risk migrated back towards the sponsoring banks when the financial crisis hit (Adrian and Shin 2010; Hardie and Howarth 2013b).[10] Deregulation, technological innovations and new risk management techniques had enabled financial innovations that led to the spread of a variety of new financial instruments, such as derivatives, (synthetic) securitizations, etc. In particular, the ability to securitize an ever-wider array of assets has been an important driver for financialization, as it has allowed for the tradability of previously illiquid assets and enabled the growth of shadow and parallel banking. In addition, it has led to the expansion of finance to formerly unbanked or underbanked communities through, for example, subprime mortgages or micro-credits (Davis and Kim 2015; Lavoie 2012; Storm 2018).

Finally, some authors argue that there has been a shift towards more market-based intermediation in the era of financialization globally (Aglietta and Breton 2001; Krippner 2005; Lapavitsas 2009; Stockhammer 2008). That would include an increase in activity and size of financial markets, as well as in their importance as intermediaries relative to banks. Hardie and Howarth (2013c, 2013d) note that the simple market-/bank-based distinction ignores important transformations of banks themselves. According to them, banks have increasingly shifted to what they call 'market-based banking' – an increasing dependence of the assets and liabilities of banks on markets and market prices.

This finding is in line with the observations that not only the financial sector has become larger and more complex during the era of financialization, but that also the actors within the system have changed in substance. Banks and other financial institutions have become increasingly complex and highly leveraged (Crotty 2009). Within the banking sector there has been a shift from traditional deposit-loan business towards fee-generating activities. The loan business has changed from business to household and real

[9] Crotty (2009) notes that at the end of 2007 J.P. Morgan Chase and Co and Citigroup had each nearly 1 tn. US$ in assets held off balance sheet in special purpose vehicles.
[10] In July 2008 forecasts predicted that assets worth up to 5 tn. US$ may be forced back onto banks' balance sheets (Crotty 2009).

estate lending (Stockhammer 2012a). In addition, banks have shifted from 'originate and retain' to 'originate and distribute' models. This is to say that banks do not retain loans on their balance sheets until repayment, and as mentioned earlier, securitize and sell the loans or transfer the credit risk to other entities via derivatives (Delivorias 2016). This practice has also fundamentally changed lending relationships. In the past a loan was a mutual commitment typically between a bank and a borrower, where both parties had an interest in the successful continuation of this relationship. The ability to securitize and sell loans transforms this relationship fundamentally, so that the bank acts like an underwriter rather than an ongoing partner (Davis and Kim 2015; Lavoie 2012; Storm 2018). This phenomenon has gone along with an increasing volume of proprietary trading and funding via markets instead of deposits. While the financial system has grown, concentration within the system has increased heavily as well. A small number of financial institutions has grown substantially.[11] The expansion of balance sheets had gone along with an increasing leverage, in particular in Europe (Shin 2012).[12] The expansion was partially related to the increasing complexity of the institutions, which led regulators to allow banks to evaluate their risks based on internal models. Due to a number of problems with those models and the incentives for their users, regulatory capital requirements for banks using them fell sharply and thus leverage of these institutions could increase (Crotty 2009; Detzer 2015a; Hardie and Howarth 2013b, 2013d; Kregel 2007).

3.1.2 Financialization and the non-financial firms

A lively field of debate concerns the effects of financialization on corporate governance and the non-financial sector, where often an increasing "dominance of finance over industry" is observed (Sawyer 2014b: 8). An argument here is that, via changes in financial markets and in corporate law, management preferences were brought in line with financial market interests. Financial innovations, such as leverage buyouts and junk bonds, and regulatory changes concerning accounting, shareholder protection and takeover rules[13], enabled an increasing number of hostile takeovers and strengthened the threat from 'markets for corporate control'. To protect their companies from this threat, managers had to give increasing attention to their firm's share price. Due to that the influence of financial investors has increased (Lazonick and O'Sullivan 2000). In addition, new financial actors, such as private equity funds and activist hedge funds have become more dominant and increasingly put pressure on listed and non-listed firms to adopt shareholder value principles (Gospel et al. 2014; Stockhammer 2012a; Vitols 2014). These new pressures and threats were accompanied by changes in the pay packages of top managers. Management pay has grown enormously, and, via the spread of variable payments and stock option pay, compensation is increasingly linked to stock price developments. Hence, managers have personal incentives to give priority to a well performing stock price over other targets (Lazonick and O'Sullivan 2000; Stockhammer 2012a).

[11] While for example from the 1970s to the early 1990s the share of total banking sector assets of the ten largest banks in the US was between 20 and 30 per cent, this had increased by the mid-2000s to over 50 per cent (Nurisso and Prescott 2017). The same can be observed in Europe: For the upper quartile of publicly traded EU banks, Steinruecke (2017) observes that the average size has increased from about 250 bn. US-$ at the beginning of the 2000s by a factor of five by 2010. For the other quartiles no such increase has occurred.

[12] The median assets-to-equity ratio of the 20 largest EU banks almost doubled between the late 1990s and 2008 from 17 to 32 (ESRB 2014).

[13] For a good overview see Deakin and Singh (2009).

Finally, some attribute the increasing commitment to shareholder value practices and financial market metrics to the changed educational background and conception of how to run a firm in top management circles (Fiss and Zajac 2004; Fligstein 1990). According to Fligstein (1990), while previously manufacturing or sales conceptions dominated managerial thinking, they had increasingly been replaced by a finance conception of the firm. Control is performed by financial tools measuring performance by profit rates. The firm is seen as a bundle of assets earning varying rates of returns, not as a producer of a given good in one industry. Those assets can be reshuffled by buying and selling.[14] With such a perception of the firm, executives needed backgrounds in finance and accounting and less in the necessities of production and sales of the relevant industry. Thus, increasingly those with the former rather than the latter background populate the top ranks in management boards. Fligstein (1990) argues that this view is grounded in the diversified mergers wave in the US after the Second World War and dominated most large firms in the mid-1960s, leading to changed management strategies towards what today is summarized as shareholder value management.

Via incentives and threats these mechanisms have helped spreading the shareholder value doctrine – expressed most in the striving for higher returns on equity above all other targets. This change is associated with increasing payouts to shareholders in the form of share-buybacks and higher dividends (Lazonick and O'Sullivan 2000). According to Lazonick and O'Sullivan (2000) with those changes managers shifted their preference from a 'retain and invest' to a 'downsize and distribute' strategy: With the spread of shareholder value principles, firms' investment rates went down and debt-to-equity ratios went up – meaning that firms took out loans to increase pay-outs to shareholders. While non-financial firms reduced real investment, it was observed that they invested increasingly in financial markets (Krippner 2011, chapter 2; Lapavitsas and Powell 2013). One of the developers of the shareholder value principle argues that the interaction between the mechanisms introduced to ensure shareholder value maximization and the incentives for professional investment managers has led to a short-term performance obsession of firms' management (Rappaport 2005).

On the macroeconomic level, the Post-Keynesian literature captures the effect of these changes on accumulation in two channels: on the one hand the 'preference channel' suggests that managers' focus has become more short-term oriented due to the changed control structure and payment schemes. This short-term orientation is reflected in a preference for financial investment over real investment, because financial investment is able to increase profits in the short-term. On the other hand, the 'internal means of finance channel' suggests that the larger part of profits which is distributed in the form of dividends and stock buy backs drains internal resources from the company that would be needed to finance investment projects. Hence, increasing financialization is expected to affect firms' investment in capital stock negatively through those two channels (Hein et al. 2015).[15] Empirical evidence for these effects has been found by a range of studies for a number of mostly developed countries (Demir 2009; Onaran et al. 2011; Orhangazi 2008a; Stockhammer 2004; Tori and Onaran 2017, 2018; van Treeck 2008a).

[14] A similar claim is made by Froud et al. (2000), who observed that there was a shift from productionism, where competition took place in product markets and success was compared within industries, and the new era of financialization, where competition takes place in capital markets and success is compared to all other firms.
[15] For a microeconomic discussion of the effects of financialization and shareholder value orientation see Dallery (2009), Stockhammer (2004) or Lavoie (2014, chapter 3.4.4).

3.1.3 *Financialization and the household sector*

Also in the household sector there have been profound changes. We can observe what Mertens (2016) describes as a 'massification of financial services', meaning that the array of institutions and the products available to households has broadened. In terms of credit, massification is strongly interrelated with innovations in the financial sector, such as securitizations and originate to distribute models, leading to lower creditworthiness standards, which via a range of new financial products (credit cards, home equity withdrawals, pay day loans) have made credit available in larger quantities and in particular to low-income households (Hein et al. 2015; Mertens 2016). Greater availability went along with greater acceptance – households increasingly got used to rely on credit and the stigma associated with debt had decreased (Cynamon and Fazzari 2008, 2013; Stockhammer 2012a).

In addition, households are much more exposed to financial and asset market fluctuations. Reforms in many countries reduced public social security provisions and privatized risks. Public pension provisions were cut and individuals were encouraged to invest in privately organized, market-based pension schemes. Also occupational pension schemes shifted from offering defined benefit plans to offering defined contributions plans (Deutschmann 2011; Langley 2004; Stockhammer 2012a). At the same time, the stock market booms at the turn of the century, aggressive campaigning by mutual fund companies and tax incentives encouraged a shift towards a higher share of securities and mutual fund shares in household portfolios (Deutschmann 2008). Hacker (2008: 126), referring to the USA, summarizes this trend, when he remarks that "private retirement fortunes are dependent on future of financial markets". Also for other basic social needs such as health care and education more and more people depend on the performance of financial markets (Hacker 2008). At the same time, housing is increasingly affected by financialization. According to Aalbers (2008: 152), when buying a house it is "not just [seen] as a home, as a place to live, but as an investment, as something to put equity into and take equity from." For low-income households to which new mortgages were marketed this meant that their ability to consume, but also the ability to keep their homes, became increasingly dependent on house price developments (Aalbers 2008).

In that way the ground was laid for a sharp rise in household indebtedness and declining household savings rates since the mid-1970s in many countries (Stockhammer 2012a, 2012b). Different mechanisms are proposed to explain these increases: booms in equity and real estate markets have increased notional wealth of households. On the one hand, this has increased consumption due to wealth effects.[16] On the other hand, it has lifted credit constraints by inflating the value of collateral, which households could offer to banks. In addition, it is argued that in the face of increasing income inequality (another feature of financialization which we will discuss later) habit persistence, subsistence consumption and relative consumption concerns have led to declining savings rates of lower income households. Those changes have enabled consumption-driven booms in some countries, but at the same time they have driven up households' debt-income ratios (Detzer 2018; Hein et al. 2015; Michell 2015; Stockhammer 2012b).

[16] For empirical evidence on wealth effects see Boone and Girouard (2002), Ludvigson and Steindel (1999), Mehra (2001) and Onaran et al. (2011).

3.1.4 Financialization and inequality

The era of financialization was associated with substantial distributional shifts. In many countries increasing personal income inequality was observed, with low income growth for the majority of wage earners and surging salaries for the upper ranks of firms' management circles. At the same time in many countries an increasing part of national income was distributed to profits, while lowering labor income shares (Hein 2015; Stockhammer 2012b). Despite some variation, the standard measures for income inequality such as the profit share, Gini coefficients, top income shares and interdecile or interquintile ratios have shown a clear upward trend in most countries. The rise started in the late 1970s or early 1980s in Anglo-Saxon economies, notably the USA and the UK, but then many others, including a range of traditional low-inequality countries, were also affected (OECD 2011; WID.world 2018). For an overview of the trends in inequality see Hein and Detzer (2015).

The literature discusses a variety of channels through which financialization has contributed to increasing income inequality and higher profit shares. It is argued that a sectoral shift away from the government and the non-financial sector to the financial sector (where generally a lower wage share can be observed) has contributed to the decline in the overall wage share. The changes we discussed for the firm sector related to increased shareholder value orientation were also a relevant factor: higher payouts via dividends and stock repurchases and higher interest payments contributed to higher rentier income shares and declining wage shares, suggesting that these higher demands are partially rolled over to workers (instead of just reducing retained profits) (Dallery and van Treeck 2011; Hein 2009). The shift in management strategy towards 'downsize and distribute' led to labor shedding in much of the big companies and has reduced the number of 'good' jobs. Hence, the threat of unemployment grew and reduced the bargaining power of workers and unions (Darcillon 2015; Froud et al. 2000; Lazonick and O'Sullivan 2000). This affected the total labor share of income, but it is also mentioned as a reason for increased wage dispersion, since strong unions are associated with a compression of the wage distribution from below. In addition, the incentive mechanisms introduced to make firms' managements follow a shareholder value strategy, discussed previously, have led to an explosion of salaries for a small number of executives. This led to further dispersion of the wage distribution at the top and an increase in personal income inequality through a marked income rise in the very top income brackets. Therefore, some of the latest increases in inequality can be associated with the phenomenon of the 'working rich' (Dünhaupt 2013; Hein 2009).

Dünhaupt (2013) suggested that financial globalization has further weakened the bargaining power of labor. Firstly, through a shift in the sectoral structure in developed countries away from manufacturing towards services. Secondly, through a rise of multinational companies, which seem particularly hostile towards organized labor and thirdly, through the threat of relocation, increasing the 'reserve army of unemployed' by adding the workforce of developing countries to it. Taking a wider view, labor's bargaining power has been weakened by further trends associated with neoliberalism: namely a trend towards delegitimizing government activity, abandonment of full employment and active demand management policies by governments, a prime focus of central banks on inflation, deregulation and flexibilization of labor markets and the liberalization of trade (Gabor 2011, chapter 2; Hein 2015; Lavoie 2012; Palley 2013, chapter 2).

Many studies have examined the manifold impacts of financialization on income inequality. These studies use a wide range of proxies for financialization accounting for different aspects of financialization[17] and find evidence of the negative impact of financialization on the labor share of income at the level of firms, industries and the macroeconomy (Alvarez 2015; Dünhaupt 2013; ILO 2011; Lin and Tomaskovic-Devey 2013; Stockhammer 2009). Also for different indicators of personal income inequality[18] there is a range of studies supporting a positive relationship with financialization (Assa 2012; Dünhaupt 2014; Flaherty 2015; Kus 2012; Lin and Tomaskovic-Devey 2013; Zalewski and Whalen 2010).

From a macroeconomic point of view, these increases in inequality should have a dampening effect on demand. For functional income inequality, a redistribution towards profits in detriment of wages should lead to lower consumption demand, due to empirically established higher propensities to save out of profits. In addition, in most countries overall demand should drop, since empirically it is found that most countries are wage-led (Bowles and Boyer 1995; Hein and Vogel 2007; Naastepad and Storm 2006; Onaran and Galanis 2014; Stockhammer et al. 2009, 2011; Stockhammer and Ederer 2008). The increases in personal income inequality should likewise lead to slower demand growth, since lower income brackets typically have higher propensities to consume (Alvarez-Cuadrado and Vilalta 2012; Brown 2004; Dynan et al. 2004). However, as we have discussed in section 3.1.3 and more extensively in Detzer (2018), financialization in some countries had compensatory effects, leading to increases of consumption demand in the face of increasing income inequality.

3.1.5 The international dimension of financialization

Domestic deregulation was matched by international deregulation of finance and capital. Since the Bretton Woods era, controls of the flow of capital have been dismantled and financial institutions have increasingly internationalized their business. With the liberalization of capital flows, exchange rates have become more volatile and are increasingly determined by capital flows and less by other factors such as trade and current account positions. Particularly in less developed countries, massive capital inflows were followed by sudden reversals, often leading first to exchange rate and subsequently to economic and financial crises (Blecker 2005; Epstein 2005b). At the same time, this has allowed some countries to sustain high current account surpluses or deficits for longer periods of time (Eichacker 2015). This is reflected in the enormous surge of current account deficits and surpluses in particular since 2000 worldwide and particularly in the Euro area (Hein 2012, chapter 6; Hein and Dodig 2015; Hein and Mundt 2012; Horn et al. 2009; Stockhammer 2012a; UNCTAD 2009; van Treeck and Sturn 2012). In section 3.2 we will discuss how, under the impact of financialization, countries have followed different demand and growth regimes based on (foreign) debt-driven booms or based on exports. As suggested by Stockhammer (2012b), those would not have been feasible for longer periods without the prior liberalization of capital accounts.

3.1.6 Financialization and financial stability

As an effect of financialization the financial system itself becomes more crisis-prone and is the cause of macroeconomic shocks of increasing frequency and severity. Stockhammer (2008) notes that "the

[17] Total external financial assets and liabilities for financial globalization; share of financial profits in firms' total profits for financialization in the firm sector; banking sector liberalization, etc.
[18] Top-income shares, earnings distribution, net- and gross Gini coefficients.

finance-dominated accumulation regime […] exhibits a high degree of fragility with crises typically emanating from international (foreign exchange) or domestic financial markets" (Stockhammer 2008: 186). This claim is supported by Reinhart und Rogoff (2008) who provide a historical review of banking crises worldwide. Their data shows that the period after the Second World War until the mid-1970s was unusually calm in terms of banking crises. In contrast, in the period of financialization, which follows thereafter, we see the return of regular banking crises. For Europe between 1939 and 1974 there were no banking crises at all, while after 1974 they occurred with a frequency of every 3 to 5 years (Eichacker 2015). Aliber and Kindleberger (2015: 351) note that '[t]he four waves of banking crises in the thirty years between 1980 and 2010 were more than in any other comparable period' and that these waves were associated with strong asset price cycles and increasing external indebtedness.

In fact Kotz (2013) argues that the working of the economic system in this period depended on the promotion of asset price bubbles through increasing accumulation of financial wealth and the deregulation of the financial system in order to sustain demand. This, however, led to increasing indebtedness of the non-financial sector as well as increasing leverage in the financial sector and finally to recurring instabilities. Similar, Stockhammer (2012b) adds that the increasing indebtedness of the household sector reduced resilience to even small economic shocks. Hence, the system is much more prone to crises.

3.2 Macroeconomic regimes and financialization

There is an ongoing theoretical debate on how financialization has changed the macroeconomic structures of affected economies (Stockhammer 2012a). The effects of financialization on the accumulation regime have been examined by various authors.[19] Three different regimes emerge in the theoretical models of the authors: firstly, a finance-led regime, where increasing financialization stimulates growth and profitability; secondly, a contractive regime, where it leads to lower capacity utilization, accumulation and profit rates; and thirdly, a so called 'profits without investment' regime, where increasing profit and utilization rates, but a lower rate of accumulation are observed. Examining these regimes in a stock-flow consistent model Hein and van Treeck (2010) show that while the finance-led regime is stable in the medium run it needs, as already noted by Boyer (2000, 2010), a very specific parameter constellation, which might only be met by a small number of countries. The regimes emerging under more realistic parameter constellations – the contractive and the 'profits without investment' regimes – however, do not yield medium-term stable results regarding financial structure of the firm sector or accumulation. However, one must keep in mind the limited nature of the models. They include neither an external or government sector, nor all the features associated with financialization, such as the increasing availability of debt for households, which may be able to alter these results.

Empirically, though, a range of studies has shown that the 'profits without investment' regime was the predominant constellation that emerged in most countries under financialization. In several countries a long-run tendency of rising levels of profits and profit shares, but weak investment in the capital stock was observed (Hein 2012, chapter 6, 2014, chapter 2; Hein and Mundt 2012; Stockhammer 2012b; van Treeck 2008b; van Treeck et al. 2007; van Treeck and Sturn 2012).

[19] See for example Boyer (2000), Cordonnier (2006), Hein (2012, chapter 3), Hein and van Treeck (2010).

Looking at national accounting identities the demand drivers for a 'profits without investment' regime can only come from three other sources of demand: flourishing consumption, rising net-exports, or increasing government deficits. Initially two corner cases were proposed which had emerged under financialization. Stockhammer (2011) called them export-led growth and credit-driven consumption growth. Based on the sources of demand and the financial balances of the relevant sectors, Hein (2012, chapter 6) had a similar classification, which was extended later in Dodig, Hein and Detzer (2016) and Hein and Mundt (2012), distinguishing three different types of regimes: debt-led private demand boom economies, export-led mercantilist economies, and domestic demand-led economies.

In the debt-led private demand boom economies, financial balances of the private household sector are negative, often complemented by negative balances of the corporate sector. Therefore, the private sector as a whole is in deficit. On the other hand, the external sector runs positive financial balances, meaning the domestic economy runs current account deficits. Regarding growth contributions, private consumption is the main driver for growth and the balance of goods and services contributes negatively. An extreme subgroup of this regime is the debt-led consumption boom regime, which is based on the private household sector running deficits and private consumption being the main driver for growth. However, the broader concept of the debt-led private demand boom regime includes also deficit-financed expenditures by the business sector. The prime example of a country running such a regime before the crisis was the USA. Its characteristics could also be observed in the UK, Spain, Estonia, Greece and South Africa.

The export-led mercantilist economies exhibit the opposite of the debt-led private demand boom regime. Here the domestic sectors have positive financial balances. This means positive current account balances and negative financial balances of the external sector. Positive growth contributions come from the balance of goods and services, so that we observe increasing net-exports, while domestic demand growth contributions are low, at times even negative. Examples for such a regime before the crisis were Germany, Japan, and Sweden. To produce an acceptable growth rate, these countries depend heavily on a sufficiently strong growth in world demand. Therefore, the debt-led private demand boom economies were essential for the success of the export-led mercantilist growth regimes in the era of financialization. A modification of this regime is the weakly-export-led type, which still shows a positive current account and trade balance, but has negative growth contributions of external demand, meaning falling export surpluses.

In the domestic demand-led economies, the private household sector has positive financial balances. Typically, we find small current account deficits and as a consequence small positive financial balances of the external sector. The government sector runs deficits and is sometimes joined by the corporate sector. Positive growth contributions come from domestic demand. However, there is no dominance of private consumption demand and no indications of credit-financed consumption, in particular. The balance of goods and services adds negatively to growth. France, Italy or Portugal before the crisis were for instance classified as domestic demand-led economies.

Looking at the enormous surge of current account imbalances, worldwide and in the Euro area, the interdependent relation between debt-led private demand boom economies and export-led mercantilist economies is apparent. It shows how central the deregulation of international capital flows for sustaining those regimes was, since it allowed countries to run higher current account deficits (and surpluses) for longer periods of time than in the Bretton Woods period (Stockhammer 2012a, 2012b).

4 Germany in the era of financialization

While the beginning of the trend towards increased financialization of the US economy is generally dated to the late 1970s or early 1980s, a similar trend could only be observed in Germany in the 1990s, even though some of the restructuring of the financial system and some of the relevant regulatory changes had been initiated earlier.

In the following we will examine these trends and processes towards financialization in Germany. To that end, we will first take on an institutional perspective, identifying the main changes that have laid the ground for the spread of financialization. We will start with a short historical review of some of the key features characterizing the German economic and financial system. Then we will gather an overview of the institutional and structural changes that were drivers for the spread of financialization in Germany. Doing so we will first look at the international and EU level attempts to coordinate and harmonize financial regulation, which were conducive to financialization. However, the more important impetuses came from changing interests and coalitions of domestic actors (Deeg 2005; Deeg and Lütz 2000), which we will examine subsequently. Strongly interlinked with these changes was a range of regulatory adjustments, which in sum aimed at changing the corporate governance system from an insider-oriented system of control towards an outsider-oriented market for corporate control. We will review these together with several further measures, which supported the increasing role, size and complexity of the financial sector and contributed to the financialization of the German economic system. After this review of drivers for the spread of financialization in Germany, we will use the overview given in section 3.1 and examine where in Germany typical symptoms and signs of financialization can be observed and where developments in Germany divert from the trends observed in other countries. Finally, we will look at the macroeconomic implications of those trends.

4.1 Historical background and characteristics of the German financial system[20]

The German financial system has historically been classified as a prime example of a bank-based financial system (Gerschenkron 1962, chapter 1; Vitols 2001, 2004; Zysman 1983, chapter 5). Despite the attempts to promote security markets and certain regulatory changes conducive to their development in the 1990s, banks have remained the main actors in Germany's financial system, even though for the big banks and for many big German firms there were relevant changes towards more market-based intermediation. Additionally, Germany has followed a universal banking model; hence, there have only been a few restrictions on the types of financial service activities banks could pursue. A peculiar feature of the German banking system is that, in contrast to most other developed countries, it still consists to a large part of publicly owned and cooperative banks, which have largely remained in their traditional roles (Deeg 1999: 9–24, 2014; Detzer et al. 2017, chapter 4).[21] [22]

[20] For a more comprehensive overview of the structure of the German financial system see Detzer et al. (2017, chapter 2 and 4).

[21] Most continental European countries had similar three-pillar banking system structures in place, but abandoned them and allowed savings and cooperative banks to be privatized (Bülbül et al. 2013).

Another defining characteristic is that the banking sector is divided into a layer of large banks, which are often active nationwide and to differing degrees also internationally, and a layer of smaller locally-oriented banks. The first group contains the big private banks and the head organizations of the cooperative and public banks. The latter consists of more than 400 savings banks and more than 1,000 cooperative banks as well as a number of smaller regionally oriented private banks. While the first group of large banks holds the larger share of banking sector assets, the larger share of loans to the non-financial sector is provided by the group of smaller locally-oriented banks (Deutsche Bundesbank 2017).

4.1.1 Private banks, their historical development and role in German industry

Four big banks account for about 20 to 25 per cent of total banking sector assets and dominate the group of private banks. Today Deutsche Bank, Commerzbank, Unicredit and Postbank[23] are classified as big banks (Deutsche Bundesbank 2017).[24] The big banks have traditionally acted as house banks to Germany's big industrial firms and were in the center of a network of cross-shareholdings and interlocking board mandates among German companies known as *Deutschland AG* (Höpner 2003, chapter 1). The strong links between banks and industry can be traced back to the second phase of German industrialization after 1880. In this phase investment growth outpaced firms' ability to generate funds internally. In this situation the large German banks provided substantial amounts of external funding, but in turn obtained influence over the companies they financed (Blackbourn 1998, chapter 7; Gerschenkron 1962, chapter 1; Marshall 1920, book 2 chapters 9-10). Despite being split up into regional institutions after the Second World War, the three big banks, Deutsche Bank, Commerzbank, and Dresdner Bank continued their close relationship with German big industry in the post-war years after they had been re-established in 1958 (Tilly 1996: 417). The large participation in industry was even extended during the interwar years and so banks held large portfolios of shares of industrial firms. In addition to those direct shareholdings, they were connected to the German industry through different channels. They held seats on supervisory boards, often as chair or vice-chairman of the respective firms. In addition, they had influence via shareholder voting powers, which they gained by exercising proxy voting rights for the shares they kept for their customers[25], and by lending proxy votes to each other to get leverage in the firms they had a particular interest in (Höpner 2003, chapter 1; Shonfield 1965: 246–55).

Through these various interlinkages with German industry the big banks formed the core of the German company network *Deutschland AG*. It is argued that the network, and the central position of banks within it, has helped to reduce pressure on firms' management to follow financial market logics. With a large part of shares and voting rights in the hands of a few friendly block holders, threats of hostile

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[22] See Detzer (2014) for an overview and some key figures on the structure of the German banking system.

[23] However, Deutsche Bank holds the majority of Postbank shares and currently is integrating the institution into its business. Thus, Postbank cannot really be regarded as a separate institution anymore.

[24] Dresdner Bank, which historically belonged to the group of German big banks, was taken over by Allianz in 2001. In 2009 it was sold to Commerzbank and does not exist as a separate institution anymore. While Unicredit and Postbank are categorized as big banks today, historically the main role within *Deutschland AG* as we describe it here was played by Deutsche Bank, Dresdner Bank and Commerzbank.

[25] In a report to the German parliament in 1964 it is mentioned that about 70 per cent of the capital of the 425 largest listed firms were held directly or indirectly (for their customers) by banks (in particular the three big banks) (Bundesamt für gewerbliche Wirtschaft 1964).

takeovers were low. In addition, relations with the big banks secured (cheap) access to external finance, so that the need to use financial markets was reduced.[26] Banks' main interest was not in profit maximization of the firms they had an interest in, but rather to secure their long-term ability to pay back their loans. Overall, the network is seen as having enhanced coordination and cooperation among the firms. Moreover, the greater independence from financial markets gave managers a higher degree of autonomy and allowed them to consider a broader range of interests in their decision making and to follow a stakeholder value approach (De Jong 1997; Höpner 2000). Both were considered integral ingredients of the German type of coordinated market economy (Beyer 2003; Höpner and Jackson 2003). Banks' interest in participating in those networks, on the other hand, stemmed from their role as creditor. Additional information and influence allowed them to reduce the risk of their lending engagements (Beyer 2003).

4.1.2 The sectors of cooperative and savings banks

The big banks had traditionally focused on large industrial firms in certain sectors, particularly heavy industries. This left a large part of the population and of businesses without access to financial services. This void was filled by savings and small private banks and later by cooperative banks, which play a key role in the German banking system until today (Deeg 1999: 33–6).

The cooperative and savings banks developed from the early and mid-19th century on, were originally founded to serve specific underbanked groups and only offered a limited range of services. Over time they gradually gained additional rights and developed towards universal banks. Despite this process of 'universalization' many of the peculiarities of cooperative and savings banks were maintained and characterize both sectors until today. They consist of a large number of economically and legally independent institutions, which cooperate within their respective groups, are restricted to do only business within their own locality and do not have profit maximization as their main purpose. Regional institutions[27] act as central institutions for the smaller local banks. Over time, those regional institutions developed a wide range of commercial and investment banking activities, in which they competed with the big private banks. Within the two groups many functions have been centralized, so that the local institutions can profit from economies of scale and scope of a big bank, without giving up their local focus. This German-specific type of group competition is seen as a decisive factor in the local banks' ability to compete with the larger private banks (Deeg 1999, chapter 2; Detzer et al. 2017, chapter 2 and 4).

4.1.3 Securities markets and the market for corporate control

Compared to the significant role of banks, securities markets played an almost negligible role in the post-war period. The dominant source of external finance were bank loans while share and bond issues were of comparatively little relevance (Deutsche Bundesbank 1965, 1984). Only a small part of firms was organized as stock corporations and from those only a fraction was listed at a stock exchange. In Germany in 1982 outstanding shares at nominal values were below 10 per cent of GDP, compared to

[26] The cheap access to loans was seen as a decisive advantage of the German system until the 1990s (Beyer 2003; Cable 1985; Porter 1992).

[27] In the savings banks sector, this role is performed by a number of *Landesbanken*. Since 2016, for the cooperative banks, after many mergers among the regional institutions, the DZ Bank serves as a single central institution for the entire sector.

about 50 and 30 per cent for the USA and the UK respectively, highlighting the bank-based nature of the German economy.[28] The low issuance activity was mirrored by the low interest of the other domestic sectors to hold shares. Before 1977 only 1.5 per cent of total monetary savings were allocated to share acquisitions. Private households' interest in holding shares was low in the post-war period, which is reflected in the falling share of stocks in their portfolios. While still at 12 per cent in 1965, it fell to around 4 per cent in the early 1980s. Likewise, institutional investors, such as insurance corporations, were not as active in stock markets as in other countries (Deutsche Bundesbank 1984). Also, foreign investors were not particularly present in the German market, which is attributed to the opaque insider-oriented regulatory framework, the lack of attractive product innovations and relatively high trading fees (Lütz 2002, chapter 5.3). Similarly, debt securities were of lesser relevance than in market-based financial systems (Deutsche Bundesbank 1965).

As mentioned earlier, threats for managers of takeovers in the stock markets were typically low. Thus, it is argued, a market for corporate control did not exist in Germany (Callaghan 2013; De Jong 1997; Höpner 2000; Höpner and Jackson 2003). Typically, an active market for corporate control is seen as a vehicle to put firms' managements under pressure to follow financial market demands and hence for financialization (Aglietta and Breton 2001; Callaghan 2013; Lazonick and O'Sullivan 2000). For its inhibition in Germany, Höpner and Jackson (2003) list four main reasons. Firstly, large blocks of shares were often held by block holders from within the German corporate network.[29] Secondly, banks were able to use their proxy voting rights to fend off takeover attempts. Thirdly, worker co-determination limited the influence of shareholders on the supervisory board, introducing additional uncertainty for takeover attempts. Fourthly, German commercial and stock corporation law put additional hurdles for takeovers: German accounting standards according to the commercial code made it difficult for outsiders to evaluate a company. Practices such as golden shares or voting restrictions, as well as high quotas to replace supervisory board members made takeover attempts more difficult. Therefore, Germany was characterized by a low activity in terms of mergers and acquisitions until the mid-1990s (Dietrich 1994) and transactions were typically consensual and not hostile (Höpner and Jackson 2003).

4.2 Institutional and structural changes as drivers for financialization in Germany

4.2.1 The international context: international financial markets and regulation

After the Second World War, the international financial landscape was characterized by national financial markets fenced by capital controls, with high barriers to entries of foreign financial firms, in which domestic regulations constrained financial innovation and competition among financial institutions (Moran 1991, chapter 1). Circumvention of these barriers started already with the emergence of the Euromarkets in the 1960s (Abdelal 2007, chapter 1; Lütz 2002, chapter 4.1). But the breakdown of Bretton Woods is seen as a decisive turning point, after which restrictions were gradually

[28] For a wider range of indicators highlighting the comparatively small role of financial markets in Germany see for example Table 1 in Detzer (2014).

[29] According to Culpepper (2005) in 1990 of the largest 171 listed companies 85 per cent had a block holder with a stake of at least 25 per cent, which is sufficient to block a hostile takeover attempt. 57 per cent even had a majority shareholder.

dismantled and international financial flows surged, growing much faster than trade or production.[30] The international financial centres in New York and London became the hubs for rapidly growing foreign exchange dealings and international loan business grew strongly at annual rates of 25 to 30 per cent between 1965 and 1981 (Lütz 2002: 153). Many financial innovations, enabled by new technologies and often created to circumvent regulatory restrictions, characterized this phase of increasing financial globalisation (Moran 1991, chapter 1).[31] Pressure to attract capital and the appeal of hosting an international financial centre led to competitive deregulations and the dismantling of domestic restrictions on finance, starting in the 1970s in the USA, followed by the Big Bang in the UK in 1986 and by deregulations in many continental European countries.[32] (Deeg 2006; Moran 1991, chapter 1).

With the increasing global character of financial institutions it was realized that also in financial regulation a certain degree of international coordination had become necessary. As a result of this process, today a complex system of international regulatory bodies and organizations exists. Those cover many areas of regulation such as banking, securities, insurance, accounting, auditing or money laundering (Davies and Green 2008; chapter 2; Rottier and Véron 2010). Therefore, different national financial markets have converged to a considerable degree regarding their basic regulations and partially also regarding their structure. Two common parallel developments in the regulation of finance have been observed: on the one hand, a strengthening and integration of supervision and the development of international standards and therefore increasing regulation; and on the other hand, financial actors and transactions have increasingly been deregulated (Mayntz 2012; Moran 1991, chapter 1-2, 5). However, it is argued that in many areas there was no convergence towards a ‘new international model’ but rather an ‘Americanisation’ of practices (Lütz 2002, chapters 5.4 and 6.4; Moran 1991, chapters 1-2, 5). For instance, in securities market regulation, the USA, pressured by domestic institutional investors, adopted a regulatory framework characterized by low barriers to product and market innovations, high levels of transparency and investor and consumer protection, and strict supervision by specialized state entities. A combination of market pressure and deliberate political action in particular by US regulatory entities increasingly promoted this model, making it the international hegemonic approach to securities markets regulation (Deeg and Lütz 2000; Lütz 2002, chapter 4.3; Moran 1991, chapter 5). Similar, in banking regulation, the diversity of regulatory approaches has been harmonized to a considerable degree since the 1970s. Three important trends can be identified: (1) a focus on prudential standards, in particular capital requirements, as the central tool for banking regulation; (2) a move in the regulation regime for larger, complex and international banks towards mixed regulation, meaning the cooperation of the regulator with the banks and a reliance on banks’ risk management tools and self-evaluations for the

[30] The qualitative and quantitative changes cannot be portrayed by a single indicator, but a good impression is given by Crockett (2000: 121f) describing the enormous increase in international transactions in this period: “There has, thus, been an increasing intensity of cross-border financial transactions. Speaking of in very round terms, in 1970, cross-border transactions in securities by residents of the G-7 countries were approximately 1 percent of GDP. By 1980, they were approximately 10 percent of GDP. By 1990, they had reached 100 percent of GDP - an exponential and indeed explosive growth that is still continuing.” Another example of the increased international financial integration is the foreign exchange turnover. While it stood at 570 bn. US-$ per day in 1989 (Epstein 2005b), it had about doubled to 1.2 tn. US-$ by 2001 and almost tripled again to 3.3 tn. US-$ by 2007 (BIS 2016).
[31] For example, new kinds of vehicles for savings were developed to circumvent the restriction on interest rates and US and Japanese banks used the Euromarkets to blur the barriers between commercial and investment banking.
[32] For instance, the ‘little big bang’ in Paris or the attempts to promote a ‘Finanzplatz Deutschland’.

regulation process; (3) in most countries a move towards universal banking models, instead of the separation of different types of banking business (Deeg and Lütz 2000; Lütz 2002, chapter 6.4). Again, the USA had a decisive influence on these regulations. The coordination of regulatory capital standards was initiated by the chair of the Federal Reserve Bank Paul Volcker, who was concerned with the declining capital of US banks. Also, the mixed regulation approach and in particular the acknowledgment of internal models to calculate regulatory capital requirements can be traced to initiatives by US regulators, lobbied by US banks. Those were hoping to gain a competitive advantage, since the use of such models was most widespread in the USA at the time (Lütz 2002, chapter 4.4). In other areas of regulation, such as accounting or auditing, a similar deliberate diffusion of market oriented US-inspired norms was observed (Arnold 2012; Kavame Eroglu 2017).

4.2.2 The role of the EU in transforming financial markets

EU level attempts to encourage free movement of capital and to create a single market for financial services led to an even more encompassing process of standard setting and harmonization for EU member states (Deeg 2005; Kregel and Tonveronachi 2014).

While the EU played a negligible role in shaping financial sector regulations and structures until the mid-1980s, the process gained increasing traction with the publication of the "Completing the Internal Market" White Paper in 1985 and the Single European Act in 1986.[33] The 'European Passport', introduced in 1989, based on the premises of the White Paper, allowed a bank, licensed in one member state, to do business in any of the other member states without additional supervision and triggered a range of further harmonization measures (Kregel et al. 2016). With the decision to build a European Monetary Union the integration and harmonization of European financial markets was boosted, based on the argument that only with integrated financial markets a common monetary policy could be effective and the full benefits of a monetary union could be achieved (Kregel and Tonveronachi 2014). Important steps in this process were the directive on full liberalization of capital movements in 1988 (Nölke 2017), the Financial Services Action Plan in 1999 (Dermine 2003) and the White Paper on Financial Services Policy in 2005 (Paul and Uhde 2010). During this process, basically all areas of financial market regulation were influenced, if not determined, by EU legislation and only a few fields in banking and financial market regulation remained purely national (Hirte and Heinrich 2009). Also, many areas of business and corporate law were affected. While it is not necessary to discuss the detailed content of the directives and regulations here[34], it is important to comprehend the general stance of the legislation and the intention of the EU actors in this process.

According to Posner and Véron (2010) the EU's primary goal was further integration and opening up of EU financial markets, but it lacked vision and willingness to shape or direct those markets. (Hilgers 2014; Posner and Véron 2010). Harmonization attempts in the EU therefore often meant the adoption of

[33] Looking at the number of major EU directives in the area of banking and finance, identified by Kregel and Tonveronachi (2014) gives a good impression of the pace of the process: there were only 2 directives until 1985, 11 directives in the period from 1986 to 1995 and 12 directives from 1996 to 2007.

[34] A very good overview of the content of EU legislation in the area of finance and banking and its impact on different EU member states is provided in Kattel et al. (2016). For readers specifically interested in the case of Germany an overview is provided by Detzer and Herr (2016) and a detailed assessment is given in Detzer and Herr (2014).

international best practices, which were largely shaped by US practices, as was discussed in the previous section. The EU therefore had an important role in the liberalisation of EU financial markets and in the spread of regulations oriented along the lines of Anglo-Saxon market-based financial systems (Deeg 2009; Eichacker 2015; Posner and Véron 2010; Seikel 2013, chapter 7), furthering shareholder value orientation and financialization (Lütz 2005; Nölke 2017; Nölke and Perry 2007). In addition, it is argued that in particular the 'European Passport' combined with the principle of home country control has led towards a regulatory and supervisory race to the bottom, and that this competitive deregulation was expected, if not intended (Jayadev et al. 2018).

4.2.3 Changes in banks' strategies

As discussed in section 4.1, traditionally in Germany the big private banks had tight relations with larger industrial firms. The banks provided firms with long-term loans, held substantial amounts of their shares, and were represented at their supervisory boards. This way, the banks formed the core of what is commonly referred to as *Deutschland AG*. This favorable position secured them a profitable field of business. However, in the 1970s banks' business in this area came under pressure. Large firms reduced their borrowing needs, due to declining fixed investment and a diversification of funding sources. In parallel, competition became increasingly fierce, when new actors, in particular the regional institutions of the savings banks, the *Landesbanken,* and foreign banks, entered this market (Deeg 1999: 80–7, 2001).[35]

After unsuccessful attempts to increase business with small and medium sized companies to compensate for the loss of business, the big banks started to extend their investment banking activities, mainly through acquisitions of existing international investment banks.[36] This strategic reorientation meant that they had an interest in the development of Germany's financial markets, which would allow them to focus more on fee-earning activities. Those interests took their most concrete form in a range of initiatives to promote Germany and Frankfurt as a financial center. Very often these initiatives were not only supported by the domestic financial industry, but also by foreign financial institutions and political actors, such as the Ministry of Finance or the Bundesbank (Deeg 1999: 80–93).[37] This contributed to triggering a range of legislative measures to overhaul Germany's financial market organization, which will be discussed in section 4.2.4.

In the course of this reorientation, it became increasingly clear to the banks that their close links to German industry in the form of cross-shareholdings, board seats, etc. and their central role in

[35] For example, market shares of the big banks in lending to manufacturing firms declined from 28.4 per cent in 1972 to only 18.2 per cent in 1982. The share of lending to all firms and self-employed decreased from 15.4 per cent to 9.7 per cent in the same period. At the same time the cooperative and the savings banks increased their shares (Deutsche Bundesbank 2017).

[36] Deutsche Bank bought Morgan Grenfell in the 1989 and Bankers Trust in 1998. Dresdner Bank purchase Kleinwort Benson in 1995.

[37] According to Deeg (1999: 87), while the formal campaign to promote Germany as a financial centre began only in the early 1990s, its real beginnings date back well into the 1980s. One of the formal outgrows of this campaign was the 'Initiative Finanzstandort Deutschland' (Germany as a financial centre) which was founded in 2003. This initiative was active until 2011. It was supported by different lobby organisations of the financial sector, but with the German Ministry of Finance, the German Bundesbank and the German Bank for Reconstruction and Development (KfW) it was also backed by important political actors (Handelsblatt 2005).

Deutschland AG was no longer necessary[38] and could even constitute a burden for their investment banking activities[39] (Beyer 2003; Beyer and Höpner 2003). Therefore, the large banks decided to reduce those links. While in 1974 banks held 20 per cent of the supervisory board seats in the 100 largest German firms, this number shrunk to 6.3 per cent by 1993 (Lütz 2000). Deutsche Bank announced in 2001 that it would not take on any supervisory board seats anymore (Beyer and Höpner 2003). Likewise, banks reduced their capital stakes in industrial firms. In 1986 banks held participations of more than 10 per cent in 46 of the 100 largest German firms. By 1996 only 31 participations of more than 5 per cent remained (Lütz 2005). With the abolition of the capital gains tax in 2002 the reduction in industrial participations got an additional impetus and the German banks moved from the center of the company network to its periphery (Lütz 2005; Max-Planck-Institut für Gesellschaftsforschung (MPIfG) , n.d.).

Not only the large private banks faced challenges. A loss of mission[40], high return demands from public owners and the envying of the big private commercial banks were central reasons for some of the *Landesbanken* to follow the development of the big banks (Scherrer 2014). In an agenda pursued by some top-executives to make the *Landesbanken* 'full-fledged' banks, they increased their international activities and their participation in industry, developed their investment banking and proprietary trading activities and adopted profit-oriented remuneration schemes (Scherrer 2014; Zimmer et al. 2011). Another impetus, accelerating this process was the loss of public guarantees, which infringed EU competition law. As a reaction, the *Landesbanken* raised substantial amounts of debt before their guarantees expired in 2005. With these large amounts of investable funds at hand, they expanded their business rapidly. They, for instance, bought domestic and foreign banks and invested heavily in US asset-backed securities (Scherrer 2014; Senkarcin 2015).

4.2.4 Restructuring of the German financial system: legal and regulatory reform[41]

The endogenous forces in the financial industry pressuring for change were strong. However, the substantial range of reforms that took place in the 1990s and early 2000s was also backed by the support from other actors and the specific political constellation at the time. Large firms were in support of strengthening German financial markets, since they saw it as a welcome opportunity to increase their financial independence. Politicians and political parties were also pushing for a change of the system.

[38] As investment banks, banks act as intermediaries only and do not take on credit risks themselves. Therefore, the need to be involved in the business of the respective firms is lower than for commercial banks. In addition, due to changes in business models and increased complexity of the relevant firms, the risk reducing advantages of the close links with the firms had diminished over time (Beyer 2003).

[39] In particular because of high risks of internal and external conflicts of interest: internally, floating a bond or share issue for a firm meant reducing business for the loan department. Also, while a bank involved in the company network profits from continuity, an investment bank's business is increased by frequent mergers and acquisition activities. Externally, advising and supporting mergers and acquisitions can collide with the role the respective bank plays in the company network. This was for example the case during a takeover in the German steel industry. Deutsche Bank supported the takeover attempt, while at the same time one of its CEOs was sitting on the supervisory board of the targeted firm (Beyer 2003).

[40] The increasing use of information technology in the 1970s stripped the *Landesbanken* gradually from their role as central clearing institutions for the local savings banks. In addition, the savings banks were no longer obliged to deposit their excess liquidity with the *Landesbanken*, which took away a cheap and stable funding source (Scherrer 2014).

[41] This chapter draws heavily from Detzer and Herr (2014, 2016), which provide a more comprehensive review of the changes described here.

The Kohl government was willing to reform financial markets as the price to be paid for European unity and the Single Market Program. But there was also support from parts of the trade unions and the regional governments. The Social Democratic Party (SPD) in particular put the restructuring of financial markets and of corporate governance arrangements on its agenda. In the 1990s the SPD put pressure on the conservative-liberal government, which was portrayed as defender of managerial elites and an increasingly dysfunctional economic order. Whilst in opposition, the SPD was able to pressure the Kohl government to adopt relatively far-reaching reforms. Reforms gained even more traction when the coalition of the SPD and the Green party[42] came to power under Chancellor Gerhard Schröder in 1998 (Cioffi 2006; Moran 1992). In parallel, the Bundesbank, which for a long time acted as a moderating force to financial innovation and liberalization, reduced its resistance to these trends during the 1980s. Reasons for its resistance were concerns about the effectiveness of monetary policy and about the spreading of short-termism. However, external and internal critics stating that it drove business abroad and sheltered the domestic financial industry from competition (Franke 1998) as well as the insight that financial innovations did not inhibit its monetary policy to a relevant degree (Deutsche Bundesbank 1994, 2003) led to this change of mind. The Bundesbank retained its conservative stance in prudential regulation, though. It however lost influence in this area when financial regulation was increasingly determined at the international and the EU level (Franke 1998).

With a broad coalition of actors pushing for change the system of regulation was substantially transformed starting in the mid-1980s. First, the Bundesbank, and later the government, passed a variety of deregulatory measures, which abolished hurdles for foreign engagements in the German financial system (e.g. certain tax laws) and allowed for more financial innovation (Domanski 2003). However, the more substantial reforms were passed in the 1990s and early 2000s and included four Financial Market Promotion Acts (FMPA), the Tax Reduction Act and the Securities Acquisition and Takeover Act. All of them aimed at establishing - what was regarded at the time as – a modern (i.e. market-based) financial and corporate governance system. To transform corporate governance, three areas of reform were seen as essential and the acts passed addressed them roughly in the following order: firstly, regulation of securities and securities markets; secondly, company law and corporate governance; and thirdly, taxation and the *Deutschland AG* (Cioffi 2006).

The first two FMPAs aimed at improving accountability and transparency at the level of markets (Cioffi 2006), through the banning of insider trading, higher information, transparency and disclosure requirements and the establishment of a federal agency responsible for securities markets. They were the first legislative acts with the primary goal to protect investors in capital markets (Deeg 2006), which was seen as essential to foster international competitiveness of German financial markets and to attract more international investors (Pfeil 1996). The introduced practices, in particular the high disclosure requirements, favored outside investors and were foreign to the prevailing insider system, which to a certain degree was facilitated by secrecy (Deeg 1999: 93).

In particular the third FMPA (passed in 1998) aimed at changing the prevailing corporate governance arrangements and shifted power from insiders to outside investors (Cioffi 2006; Deeg 2006). By restricting proxy voting and representation on company boards it reduced banks' power in corporate

[42] *Bündnis 90/Die Grünen*

governance. At the same time, it abandoned voting caps, instituted a one-share-one-vote rule, and prohibited the voting of cross-shareholdings. Those measures empowered minority shareholders, while lowering the defense capabilities of firms against hostile takeovers. This was complemented by the Securities Acquisition and Takeover Act, which came into force in 2001. It formally regulated merger and acquisitions and limited those defensive capabilities further (Bradley and Sundaram 2003). In total this weakened insider control, while at the same time it strengthened the market for corporate control. The reduction of the interlocking cross shareholdings of the *Deutschland AG*, which was triggered by the elimination of the 50 per cent capital gains tax through the Tax Reduction Act reduced another protective barrier, making hostile takeovers a realistic threat for many German firms (Cioffi 2002; Deeg 2006).

Finally, the third FMPA legalized stock repurchases and the use of stock options as management compensation – practices strongly associated with the diffusion of financialization and the shareholder value concept in the corporate sector, as described in section 3.1.2. Altogether, these reforms provided the legal basis for the spread of financialization in German firms. Higher transparency to outside investors, the weakening of protective barriers and a legal strengthening of a market for corporate control empowered financial investors and enabled a "growing influence (control) of financial firms and financial markets over the management priorities and practices of non-financial corporations" (Deeg 2014: 59).

Measures passed in these decades also provided the ground for the extraordinary expansion in financial sector activity and size. Higher transparency and liquidity in securities markets increased trading in those markets more generally. A range of financial innovations (e.g. certificates of deposits, futures and options) and many new financial actors (e.g. money market funds, several types of investment funds and hedge funds) were allowed in German financial markets. At the same time, for many actors restrictions on funding sources and investment opportunities were lifted, allowing for more market-based financing, higher leverage and riskier investment (Deutsche Bundesbank 2015b).

To sum up, the institutional environment has changed enormously and became more conducive towards financialization. Regulatory coordination on the international level promoted an Anglo-Saxon model of financial regulation, which puts little barriers to financial activities and financial innovations and strengthens financial investors. The EU, in its attempts to promote financial market integration, supported the spread of those rules. However, the main impetus for change came from within. Some of the large actors in the financial system welcomed and promoted a larger role for financial markets, which was taken up by the political class and led to a range of financial market reforms. Those reforms, on the one hand, allowed for many new actors and products in the German financial system. On the other hand, they increased financial markets' role in the corporate governance of non-financial firms, which supported the spread of financialization in the firm sector. We will discuss this evolution briefly in the following section.

4.2.5 Unravelling of Deutschland AG and the emergence of a market for corporate control

As a result of the strategic reorientation of the big banks and numerous legal changes the German company network, the *Deutschland AG,* has gradually dissolved over time. The unraveling of the network with big financial firms disappearing from the center, but also with an increasingly less dense network among the other large non-financial firms is well documented by the successive analyses of the Max-Planck Institute (Höpner and Krempel 2004, 2005; Max-Planck-Institut für Gesellschaftsforschung (MPIfG) , n.d.). For example, while there were 143 shareholdings among the 100 largest German firms in 1996, this number had decreased to only 67 in 2002. In addition, the network was characterized by personal links with CEOs from one firm sitting on supervisory boards of other firms. Also, those links have been reduced, predominantly by financial institutions. Beyer (2006) reports that the number of directed board memberships from firms among the top-100 had halved from close to 200 in 1996 to about 100 in 2002.[43] [44]

With the dissolution of the network and the retreat of some former shareholders, the ownership structure of firms changed. Ownership has become more dispersed and the number of block holders has decreased.[45] At the same time, the ownership stakes and the holding of voting blocks by foreign investors has increased significantly[46] and there are indications that many of those foreign investors are UK- or US-based institutional investors. More generally, the role of institutional investors as owners of German firms has increased (Detzer 2015b; Fichtner 2015; Weber 2009). Many authors see the increased importance of institutional investors as a key channel for the spread of financialization among firms. Crotty (2005) notes that institutional investors were an important vehicle to impose a short-term financial market view on firms' management in the US corporate sector in the 1980s and 1990s. Institutional investors are operating in a highly competitive business, where short-term performance is important for the allocation of funds. By design institutional investors try to impose this short-term view on firms and to force firms' management to focus on short-term share price development rather than on long-term company performance (Crotty 2005). Similar views on institutional investors influence in German companies are brought forward by a range of authors (Beyer 2009; Deutschmann 2005; Dörre and Brinkmann 2005; Lütz 2005; Windolf 2005a, 2005b). Fichtner (2015: 340) adds that the changed ownership structure has "improved the conditions for shareholder activism in Germany - as foreign investors are more inclined to support Anglo-American-style activism that seeks the creation of high returns for shareholders."

[43] For financial institutions the number of board memberships fell from about 100 in 1996 to only 25 in 2002 (Beyer 2006). Windolf (2014) confirms these developments looking at the 250 largest companies. While there were 3,302 personal links among those firms in 1992, by 2010 there were only 752 links left. Also, the number of average board mandates held by banks in the network decreased from 7 to only 0.5.

[44] However, the shortcoming of those numbers is, as the authors acknowledge, that they focus on the domestic German network of interlocking board mandates, while ignoring potential new forms of networks. Van der Pijl, Holman, and Raviv (2011) show that by the mid-2000s German large corporations had established links in a European and transatlantic network.

[45] Of the large listed companies in 1990 about 85 per cent had a significant block holder with a share above 25 per cent. By 2011 this number had fallen below 60 per cent (Fichtner 2015).

[46] Total foreign ownership of domestic joint stock corporations has increased from 12.8 per cent in 1991 to 33.7 per cent in 2007 (measured by market capitalisation) (Detzer 2015b). In the 160 firms listed in one of the German stock market indices foreign investors held 20 per cent of the existing voting blocks in 2011 (Fichtner 2015).

Finally, these changes - the gradual dissolution of the German company network, the reduction in voting blocks, the legal changes regarding hostile takeovers[47], certain other changes (as for example in accounting), and the increasing uncertainty about the behaviour of some key actors, such as the big financial institutions, in case of a take-over attempt – have lowered the barriers which had impeded a market for corporate control in Germany. With this, from the late 1990s onward, Germany registered an increase in overall mergers and acquisition activity[48] and in the number of hostile takeover attempts.[49] While in international comparison activity is still low, Höpner and Jackson (2006) argue that the overall higher activity and in particular the prominent hostile takeover of Mannesmann by Vodafone has led to a growing awareness of the threat of hostile takeovers in German management circles. Hence, top managers have become more concerned with retaining a high share price as a defence mechanism and are therefore more responsive to financial market demands.[50] After all, with the legal and strategic changes discussed in the previous chapter, ownership structure changed and some of the barriers for a market for corporate control have been dismantled, allowing for financialization to spread in the firm sector.

4.3 The emergence of financialization in Germany

In section 3.1 we have looked at the characteristics of financialization as documented in the literature. In the following we will use this pattern to give an overview of where Germany matches the described trends. In doing so we will focus mostly on the trends observed before the financial crisis.

4.3.1 Financialization in the financial sector[51]

In contrast to the trends observed in the USA, national accounts data on value added and employment for Germany indicates that no structural shift in the economy towards financial services took place[52] and there was also no surge in profits[53] going to the financial sector (Dünhaupt 2012). Furthermore, typical indicators on financial market structures do not confirm a shift towards a more market-based financial system. While financial markets have increased in size and activity since the 1980s, they are still small in

[47] Besides the legal changes, there is some evidence that firms moved away from other control enhancing mechanisms and increased transparency about the (non-)existence of such mechanisms. Both is conducive to a more active market for corporate control (Deeg 2009; European Commission 2007).

[48] From 1991 to 1997, a period with a heightened number of domestic mergers due to German reunification, there were 1,479 deals recorded annually amounting to 1.4 per cent of GDP. The following period from 1998 to 2005 recorded 1,607 deals annually amounting to 7.5 per cent of GDP (Jackson and Miyajima 2007; Jackson and Sorge 2012).

[49] Höpner and Jackson (2006), report two cases of hostile takeovers (incl. hostile bids, unsolicited offers, building of hostile stakes) in the period from 1995 to 1999 and 13 cases in the period from 2000 to 2005.

[50] See Detzer et al. (2017, chapter 11) for a more comprehensive overview.

[51] Source for data provided in this section is Detzer et al. (2017) chapters 2, 5 and 8, unless indicated otherwise.

[52] Value added in the financial sector fluctuated around 4.5 per cent in the period from 1980 to 2007 and has shown a declining trend after the crisis. Also, employment in the financial sector was relatively stable from the early 1990s until 2007 and started declining thereafter. Relative to total employment financial sector employment showed a declining trend after the mid-1990s already (Statistisches Bundesamt 2006, 2018).

[53] Return on equity and return on assets for the German banking sector were relatively stable in the 1990s and declined in the early 2000s. Despite their recovery in the years leading up to the crisis, they were low by international comparison. Likewise, the return on equity of the financial sector declined in the 1990s and stayed low, despite a recovery in the first half of the 2000s. The financial corporate sector's profit share fluctuated around 70 per cent without a clear tendency to increase or decline.

international comparison. The size of Germany's private domestic bond markets increased from 1990 to 2000. However, for the financing of non-financial corporations, they remained a negligible source of finance[54] and banks remained the main issuers on debt markets.[55] Also, stock markets are still relatively undeveloped in international comparison. This holds true for their size, as well as for their activity. The ratio of stock market capitalization to GDP was around 20 per cent until the mid-1990s. During the following stock market hype it grew to 68 per cent in 2000, but declined again thereafter and internationally its value stayed comparatively low. The same is true for the number of listed companies and stock market value traded.

However, in line with the financialization hypothesis, we find that growth of financial assets and liabilities accelerated strongly in the 1990s in Germany as a whole.[56] The ratio of total financial assets held by domestic sectors to GDP increased from 410 per cent in 1991 to roughly 670 per cent at the end of the decade. Then it grew remarkably slower and reached 700 per cent in 2007. Growth was driven by a strong expansion of financial sector size and activity. Financialization of the financial sector expressed itself by the enormous surge of financial sector balance sheets during the 1990s. Assets held by the financial sector stood at 197 per cent of GDP in 1991, grew rapidly to 355 per cent until 2000 and then expanded further, but remarkably slower, to 389 per cent in 2007. The enormous surge in the 1990s was mostly driven by banks. Their balance sheets expanded from roughly 158 per cent of GDP in 1991 to 257 per cent in 2000. In addition, new types of financial intermediaries[57] occurred and grew from 11 per cent in 1991 to 45 per cent until 2000 and then further to 54 per cent in 2007. The insurance sector was growing relatively stable over the whole period from 25 per cent in 1991 to 65 per cent in 2007. The enormous surge of banks' balance sheets in the 1990s is only partially explained by a surge in loans, but was also driven by a strong increase in financial securities holdings. Looking at different parts of the banking system, most of the growth in the 1990s was due to an expansion of a few large banks[58], reflecting the strategic reorientation of those banks, which we will discuss next.

As discussed in section 3.1.1, financialization is not only associated with a general expansion of the financial system, but also with numerous qualitative changes. For Germany the most significant changes

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[54] Even though non-financial corporations tripled their outstanding stock of debt securities from 1991 to 2007 it remained low at 4.5 per cent of GDP.

[55] Banks' outstanding debt securities increased from 32.5 per cent of GDP in 1991 to around 63 per cent by 2000 and stagnated subsequently until the financial crisis.

[56] While from the 1960s until 1980 financial assets of the domestic sectors in percent of disposable income grew on average by 2.9 per cent per year, in the 1980s the ratio of financial assets to GDP grew even more slowly with a rate of 1.6 per cent. This changed remarkably in the 1990s, when this ratio grew with an annual average growth rate of 6 per cent.

[57] Most important here are mutual funds, which accounted for 53 to 84 per cent of this sector in the period from 1999 to 2017. The rest consists of other financial institutions including auxiliary activities to banking and insurance and finance companies belonging to non-financial firms, as well as special purpose vehicles (Deutsche Bundesbank 2017).

[58] Looking at 10-year averages since 1951 on average large and small banks of all groups grew at about the same rate. Starting in the period from 1991 to 2000 there was a remarkable divergence. The balance sheets size of the big private banks, the *Landesbanken* and the primary institution of the cooperative banks grew by 195 per cent in this period, while the balance sheet size of the private regional banks, savings banks and cooperative banks grew by only 56 per cent. This difference prevailed in the 2000s until the financial crisis. However, with overall lower growth rates (own calculations based on Deutsche Bundesbank (2017)).

can be observed within traditional banks. As discussed in section 4.2.3 the big German private banks increasingly focused on investment banking and shed their former close relations to German industry. Some of the *Landesbanken* followed this strategic decision. The erosion of institutional sources of banks' influence on firms led to a decreasing ability and willingness to perform their traditional function as house banks for large firms in corporate governance and industrial organization in Germany. Deeg (1999: 73–5, 2001) interprets this move of the large banks and the *Landesbanken* into investment banking and the parallel reduction of their traditional commercial banking activities as evidence for a shift to a more Anglo-Saxon model of market-based finance.

However, those banks that turned towards investment banking in the 1990s changed their business focus again in the late 1990s and early 2000s. When the big banks initially bought into international investment banking in the early-1990s, it was largely an advisory fee-earning and securities issuing business (Deeg 1999: 90; Hardie and Howarth 2013a). In the decade preceding the financial crisis though, the focus of those banks changed towards proprietary trading and balance sheet expanding activities[59] (Lapavitsas and Powell 2013). With this new focus, the weight of loans to non-financial corporations and other long-term assets declined in favor of increasing interbank-lending and securities trading.[60] In addition banks increased their derivative positions strongly and much in excess of what would be expected for hedging purposes (Lapavitsas and Powell 2013; Memmel and Schertler 2012).[61] For the *Landesbanken* a particular impetus was given by the lapse of state guarantees in 2005. They strongly increased their borrowing to secure themselves substantial amounts of cheap funding, which they used to expand interbank lending and to purchase securitized assets. The enormous expansion of balance sheets was enabled by a surging leverage ratio of the larger banks.[62] This surge in leverage was made possible by the regulatory changes on banks' capital requirements in this period (Admati and Hellwig 2014, chapter 11; Detzer 2015a; Detzer and Herr 2014; Shin 2012). In addition, some of those large banks rapidly expanded their on- and off-balance sheet activities in the form of asset-backed commercial paper (ABCP) conduits and special purpose vehicles. Acharya and Schnabel (2010) report that at the beginning of 2007 Germany was the biggest sponsor of ABCP-conduits, right after the USA and the UK, with a total of 204 bn. US-$ sponsored by 15 German banks.[63] According to data provided by the Deutsche Bundesbank (2009), the volume of off-balance sheet ABCP-programs in August 2007 amounted to 74 bn. US-$. The expansion of on- and off-balance sheet activities went along with a strong

[59] In line with what is observed for many banks worldwide in the area of financialization.

[60] While this was mostly due to an actual acquisition of assets, partially the increase came also from the reclassification of assets to reduce regulatory capital requirements (Hardie and Howarth 2013a).

[61] For example, commercial banks' notional amount of interest rate swaps outstanding increased from 53 per cent of total assets in 1993 to 1,283 per cent in 2007. For savings banks the figures are 1.1 per cent and 22.5 per cent respectively (Memmel and Schertler 2012).

[62] The capital-to-asset ratio of the big banks decreased from 7.4 per cent in 1994 to 4.6 per cent in 2007. For the *Landesbanken* a similar trend occurred only after 2001 but from a lower level. The ratio decreased from 4.7 per cent in 2002 to 4.1 per cent in 2007. For the primary savings and the primary cooperative banks we observe a relatively consistent increase of the capital-to-asset ratio from the mid-1970s and early 1980s respectively (own calculations based on Deutsche Bundesbank (2017)).

[63] For the Dresdner Bank the exposure to such conduits amounted to 10 per cent of total assets, for the Sachsen LB even to 30 per cent (Hardie and Howarth 2013a). Often these conduit structures were used to circumvent regulation and supervision, as for example in the case of the vehicle 'Ormond Quay' of Sachsen LB (Deutscher Bundestag 2018).

internationalization in the 2000s. While foreign assets on bank balance sheets accounted for about 17 per cent in 2000, they had almost doubled to 33 per cent in 2008. The use of securitization, not considering traditional covered bonds (Pfandbriefe), was rather limited in Germany in the early 2000s, but then increased rapidly between 2004 and 2006 by between 500 and 1,000 per cent until the onset of the financial crisis, although from a low level[64]. Also the use of synthetic securitizations[65] spread rapidly among the larger banks (Hardie and Howarth 2013a).

In contrast, for the sector of local savings and cooperative banks, most authors observe that the relationship model has largely prevailed, even though, due to regulatory changes, like the Basel requirements, there has been a professionalization of bank-firm relationships. This affected information policies, as informal reputation networks were replaced by formal financial and accounting data. However, this has rather helped firms to maintain the close relationship with their house-banks than to loosen it (Bluhm and Martens 2009). Generally, also small banks have professionalized and are able to provide a larger array of services to the sector of small and medium sized enterprises, including for instance the provision of alternative forms of finance such as leasing and in some cases also access to equity finance (Deeg 1999: 114–21, 2010; Hardie and Howarth 2013a).

Based on that, the observed changes occurred unevenly in the banking sector and had a bifurcating effect. While the big banks underwent substantial changes in their business models, abandoning the former relationship banking model and moving into investment banking (in its different forms), local banks and in particular savings and cooperative banks maintained a much more traditional relationship banking model, albeit in an evolving form (Deeg 2009; Jackson and Sorge 2012). Hence, features that are typically associated with financialization of the banking sector in Germany mostly affected a limited number of large banks. However, some new financial instruments have also been spread to those smaller banks. Small cooperative banks have recently been enabled to securitize assets (Memmel and Schertler 2012) and through the *Landesbanken* smaller savings banks had access to synthetic securitizations (Hardie and Howarth 2013a).

Besides the changes in the banking sector the general financial landscape has become more diverse: a range of new financial actors has developed. The Deutsche Bundesbank (2012) summarizes these new actors under the heading of a 'shadow financial system' consisting of money market funds, open and closed mutual funds and other financial institutions. As shown earlier, in terms of the whole financial system this group had grown from roughly 6 per cent of financial sector assets in 1991 to 14 per cent in 2007 and constitutes still a relatively small part of the financial system. This is especially the case in comparison to the USA, where it has grown to represent more than half of the financial sector. Also, money market funds and hedge funds play a negligible role, while the largest part of the shadow banking system in Germany is constituted by open-end mutual funds, which contributed about two-thirds of the sector's assets in 2007. Besides those, a key role in the crisis was played by so called financial vehicle corporations (FVC) or special purpose vehicles (SPV), which constituted an important part of the shadow

[64] In 2006 total securitized assets outstanding were at 4 per cent of GDP in Germany, while the figure stood at 32 per cent in the UK (Hardie and Howarth 2013a).

[65] "Synthetic securitisation transfers the credit risk of a portfolio of exposures by means of a credit protection agreement [e.g. derivatives, guarantees], without transferring the ownership of the securitised exposures" (EBA 2015: 7).

banking system internationally. The Bundesbank only provides time series data for such vehicles located in Germany for the period after the crisis. Assets held in such vehicles in Germany were around 60 bn. € in 2011 and therefore relatively small (Deutsche Bundesbank 2012).

However, while the shadow banking system domiciled in Germany was and is comparatively small, German banks were strongly connected to the international shadow banking system before the crisis. The Bundesbank approximates the exposure of German banks to the international shadow banking system through on-balance sheet assets and liabilities to about 150 – 250 bn. € between 2004 and 2005. Exposure on the asset side increased after this and had peaked at 375 bn.€ in May 2008, while liabilities stayed at the level of 2005 (Deutsche Bundesbank 2012). In addition, as noted earlier, some of the large banks had used FVC to reduce their on-balance sheet exposure, by formally selling assets to those corporations. However, the risk transfer was incomplete and much of the risk transferred to those vehicles migrated back onto banks' balance sheets, becoming one of the transmitters of the financial crisis to Germany (Deutsche Bundesbank 2012, 2015a). These FVC were most extensively used by the *Landesbanken*, the big private banks and a few smaller ones (Detzer et al. 2017: 69; Hardie and Howarth 2013a).

To sum up, we can neither observe the enormous prominence of the financial sector in the economy as observed in the USA, nor do the figures indicate a shift towards an Anglo-Saxon style market-based financial system. However, we can attest that the financial sector has grown strongly, in line with the financialization hypothesis. While we see some new actors appearing in the financial sector, the most important changes occurred within the banking sector, with the large banks focusing on proprietary trading and investment banking and expanding enormously, in line with what is described as market-based banking (Hardie and Howarth 2013a, 2013b). By contrast, the smaller banks have evolved but not fundamentally changed their business model.

4.3.2 Financialization in the non-financial corporate sector[66]

In the non-financial corporate sector a growing responsiveness to the preferences of financial institutional investors and the adoption of shareholder value practices was observed. The shift in the importance in the investor base towards international and institutional investors, including an increasing number of activist investors (Detzer 2015b; Fichtner 2015), as well as the growing threat from the market for corporate control (as discussed in section 4.2.5) serve as the main reasons for this development (Deeg 2009; Fiss and Zajac 2004; Höpner 2003, chapters 2-3).[67] First and foremost, this means a growing emphasis on maximizing return on equity for shareholders, which is indicated by firms adopting profitability targets and making them central instruments of control and management. A further sign of the spread of shareholder value orientation is the growing transparency by many firms, which is indicated by the adoption of investor-friendly accounting standards (even before this became mandatory for listed firms) and the publishing of quarterly results. Also the establishment of investor relations departments underlines this new emphasis (Jackson and Sorge 2012; Jürgens et al. 2000).

[66] Source for data provided in this section is Detzer et al. (2017) chapters 2 and 10, unless indicated otherwise.
[67] There are other reasons mentioned, which have contributed to this shift, as for example changes in education of senior management (financial, business, law vs. technical) and in the recruitment markets for top managers (external vs. internal) (see for example Berghoff (2016)). However, in this paper, we focus on causes closely related to the changes in financial markets and financial market regulations.

Finally, many firms adopted remuneration schemes, favored by shareholder value advocates, supposed to bring managers' interest in line with those of investors. These were on the one hand strong increases in top-management salaries (Detzer 2015b), and on the other hand the increasing use of stock-price linked compensations, in particular stock option pay.[68]

Notwithstanding that, not all firms followed these trends to the same degree. Deeg (2009) observes that within the German economic system a subgroup of firms has emerged, which in terms of financing behavior, strategy, objectives, etc., follow an 'international model', which is characterized by a high degree of financialization and shareholder value orientation. These firms use increasingly foreign or international markets to obtain finance and rely more often on self-financing and market-based finance. The rules they are subject to and the norms they follow concerning financial transparency and practices as well as corporate governance converge. Finally, they are increasingly exposed to outside pressure, especially from financial investors. Those companies are primarily big, listed firms with widely dispersed ownership. In contrast to that small and medium sized companies, which are too small to access financial markets and continue to rely on bank finance, as well as firms with a dominant block holder are less pressured to follow these trends. However, some choose voluntarily to adopt some shareholder value practices (Deeg 2009; Lehrer and Celo 2016; Lehrer and Schmid 2015). Also smaller firms have increased their transparency, introduced improved measures of managerial accounting and have become more profit-sensitive due to the increasing focus of banks on quantitative data and ratings for their loan decisions (Bluhm and Martens 2009). Therefore, Deeg (2009) attests a certain hybridization in the non-financial sector too. Primarily small and medium sized companies and those with a concentrated ownership structure continue following the 'traditional model', while a group of firms follow the (financialized) 'international model' and some combine elements of both.

Hence, on the firm level we can see clear indications of financialization, even though the effects are concentrated in a certain group of firms. In the following we will assess if these trends towards financialization can also be confirmed at the macro-level. Initially it is interesting to note that despite the efforts to promote financial markets and the increasing role firms give to stock market valuations, for the sector as a whole, stock markets and financial markets more generally continued to play a negligible role as a source of finance. In the two five-year periods between 1991 and 2000 the most important sources of finance were internal means and depreciation allowances (70-80 per cent), and bank loans (around 20 per cent). Bond and stock markets contributed negatively in these periods. After the allowance of stock buy backs in 1998, firms made extensive use of this new option and stock markets contributed negatively in both 5-year periods between 2001 and 2010 (about 15 per cent). Only bond issues played a positive role in the period from 2001 to 2005 (Corbett and Jenkinson 1997; Detzer et al. 2017, chapter 10; van Treeck et al. 2007).

[68] In 1990 only one smaller German company had adopted stock option pay. In 1996 Daimler and Deutsche Bank introduced it, which was highly contested because formally it was still not legal. This triggered a process in other firms. In 1997 already 9 of the DAX 100 companies used a legal loophole to adopt this practice. However, a watershed was the legalization of stock option pay in 1998. The number of firms in the DAX 100 which had introduced this practice was 22 in 1998. Already one year later about 40 firms had adopted it (Sanders and Tuschke 2007). In 2006 65 of the largest 125 firms (by market capitalization) and all but one of the DAX 30 companies had adopted such a scheme (Chizema 2010).

As discussed in section 3.1.2, financialization and the spread of shareholder value in management circles is associated with a preference for financial investment, an increasing financial pay-out ratio and a decline in real investment. Regarding increased financial investment, firms of the non-financial corporate sector have expanded their balance sheets from below 2.8 tn. € in 1992 to 5.4 tn. € in 2007. While the capital stock only grew by 50 per cent to 2.4 tn. €, the main growth driver was financial assets, which increased by 180 per cent to 2.5 tn. € in this period. The expansion was financed to a large degree by debt, which increased from 1.1 to 2.1 tn. €. The heightened importance of financial investment is confirmed by data on firms' financial income, which has increased strongly as a share of firms' total surplus in the 2000s. Looking at financial pay-out ratios of firms, it is striking that despite the reduction in the level of interest rates and the corresponding decrease in total interest payments of firms, those have shown a rising trend, in particular in the 1990s. This was driven by strong growth in dividend pay-outs in the 1990s. Whereas total dividend pay-outs were below 40 per cent of cash flows in 1990 it had increased to 58 per cent by 2001 and fluctuated between 50 and 60 per cent for the rest of the 2000s. Hence, using financial investment and pay-out ratios as indicators, there are strong signs of financialization in the firm sector.

The spread of shareholder value and financialization is often associated with a decline in real investment. This can be observed for Germany as well. While gross fixed capital formation was relatively high in the 1990s (on average 19,7 per cent of GDP), potentially driven by the reunification and the new technology boom, it fell to only 16.6 per cent in the business cycle of the early 2000s before the crisis, where it marked a historical low. There is a range of empirical studies trying to prove a link between increasing financialization or the spread of shareholder value and the observed decrease in investment spending by firms. Those studies typically confirm the presumed negative relationship.[69] However, most studies have focused on the USA or the UK (Davis 2018; Onaran et al. 2011; Orhangazi 2008a; Tori and Onaran 2018; van Treeck 2008a), while for Germany the econometric research is relatively sparse. Stockhammer (2004), using the share of financial income to value added as a proxy for financialization, tested its effect on accumulation and could not find significant evidence for a negative effect in Germany in the period from 1963 to 1990, while for the US, UK and France he found a statistically significant effect. This is no surprise, since, as discussed earlier, only in the 1990s decisive steps towards financialization in Germany took place. Looking at a later period (1995 – 2015), Onaran and Tori (2017) use firm level data for 14 EU countries and find significant negative effects of financial payments (internal means of finance channel), financial income (preference channel) and indebtedness on firms' investment. Using only individual country samples, they confirm the negative effects on investment for the first two variables for Germany.[70]

4.3.3 Financialization in the household sector

For the German household sector different measures indicate that financialization is not very advanced yet. In terms of preferred savings vehicles and portfolio composition, the signs for increasing

[69] Interestingly, however, when in some of those studies the sample is divided into small and large firms there occurs a positive effect for small firms for financial profits received, which is taken as a proxy for financialization and shareholder value orientation. An explanation provided for this is that financial profits seem to ease the financing constraint for these firms (Orhangazi 2008a; Tori and Onaran 2017).

[70] They did not include indebtedness into their country level estimations.

financialization are weak. While during the years of the stock market boom in the late 1990s and early 2000s savings flowing into stocks and mutual funds had increased strongly, this reversed when stock prices started to decline. It nevertheless shifted portfolio composition in a more lasting fashion. Taken together, investment funds, stocks and other equity participation made up 15 per cent of household portfolios in 1991, while in 2007 this figure stood at 24 per cent (Detzer et al. 2017, chapter 13). However, the share of households owning shares directly or indirectly indicates that shareholding is no widespread phenomenon. While at the heights of the stock market boom in 2000, 18.5 per cent of households were holding shares directly or through funds, this number declined to 14.4 per cent by 2008. For the USA the respective numbers are 62 and 56 per cent (Berghoff 2016). Hence, in spite of the reform efforts in the 1990s and early 2000s to make stock investments more attractive, there is little evidence that indicates the development of a stock market culture among German households.

Different from many other countries in the era of financialization, net savings rates, even though they had declined in the 1990s, are still comparatively high and have even risen during the 2000s. However, the increased savings rates are mostly the result of increased saving in the upper half of the income distribution, while in the lower half savings rates have fallen (Brenke 2011). Also, in contrast to the trends associated with financialization, the ratio of gross household indebtedness to disposable income fell in the 2000s. While it stood at 86 per cent in 1991, it grew to 116 per cent until 2000 and then showed a declining trend. Shortly before the crisis in 2007 it stood at 102 per cent.[71] This is in stark contrast to what happened in a number of other developed countries, where in the period from 2000 to 2007 we have often seen debt in the household sector stepping up (Hunt 2014).

Different authors tried to explain the consistently high savings rates and the decline in indebtedness in contrast to the trends in other countries. The increasing savings rates in the 2000s are related to three factors: firstly, to redistribution effects; secondly, to precautionary savings because of the weak economic performance and the uncertainty related to the labor market and social reforms of the early 2000s; and thirdly, to the absence of wealth effects on consumption (Klär and Slacalek 2006; van Treeck and Sturn 2012). As discussed in more detail Detzer (2018), for the surges in household indebtedness to occur, as experienced in several countries, credit demand and supply factors must be met. On the demand side, it is noted that for Germany consumption based on increasing wealth prices is hampered by the portfolio composition of households. They hold a comparatively low level of assets that fluctuate in market prices, such as stocks. Also, housing wealth is less widespread due to the comparatively low home-ownership rate. More specifically, household net- and gross-wealth increased only moderately (Girouard et al. 2006) and prices for real estate have basically stayed flat or have declined since the mid-1990s until the crisis (Hein 2011; Klär and Slacalek 2006). Finally, a range of studies has shown that propensities to consume out of wealth are generally lower in bank-based systems such as Germany (Dreger and Slacalek 2007). In addition, Mertens (2017) argues that the German system of social policy and welfare provision has diminished credit demand, even though there have been some changes: credit-relevant areas of social policy such as housing, healthcare, education and old-age provision are considered as public tasks. Public provision and welfare state generosity is relatively high in these areas, which leaves less of a gap to be filled with credit. In addition, Germany followed a savings-promotion

[71] Own calculations based on data from European Commission (2018) and Statistisches Bundesamt (2013).

approach (in contrast to a credit-based approach as in the USA) to welfare provision. An example for this can be found in housing policy where the saving in home loan and savings contracts is publicly subsidised for low income households so they can build an equity stake before buying a house. Logemann (2008) argues that generally consumer credit played a larger role in the US and was de-stigmatized already in the post-war years, while in Germany consumption on credit was regarded much more critical. According to him, this continues to shape households' attitudes towards credit until today. On the supply side, the increased availability of credit especially to low-income households due to new technologies and the ability of banks to securitize and sell these loans, as discussed in section 3.1.1, has not to the same degree occurred in Germany. The local cooperative and savings banks, which have dominated retail credit markets, were often too small to use innovations such as securitization efficiently. In addition, due to traditions in mortgage lending in Germany certain innovations had not spread. Therefore, a comparable expansion of loans on this basis did not occur. The large banks, on the other hand, had focused on expanding internationally and did not see entering the retail market as a profitable route before the crisis (Mertens 2016).

4.3.4 Financialization and internationalization

In 1981, Germany, like many other countries after the breakdown of Bretton Woods, abolished any relevant capital controls (Detzer and Herr 2016). After this, international financial integration of Germany proceeded rapidly, and external assets doubled from 33 to 64 per cent of GDP in the period from 1981 to 1990. Another leap in terms of financial integration was taken from the mid-1990s to 2001 in the run-up to the European Monetary Union and during the stock market boom, when this figure increased from 65 to 148 per cent. Finally, after a short decline in 2002 it increased again until 2007 to 207 per cent.[72] [73] The latest expansion was driven largely by banks, whose share in external assets fluctuated around 35 per cent from 1975 to 1999, but increased to 47 per cent of external assets between 1999 and 2007.[74] The bulk of lending in this period went to the Euro area, although there was also substantial lending to the USA. (Detzer et al. 2017, chapter 5; Shin 2012).

4.3.5 Financialization and inequality

Since the 1980s, Germany has experienced a considerable redistribution of income. Looking at trade cycle averages of the wage share, a considerable redistribution at the expense of the labor share towards broad capital income can be observed. The wage share declined from an internationally comparatively low level of 67.1 per cent in the trade cycle from the early 1980s to the early 1990s to 63.3 per cent in the trade cycle before the crisis. Also, personal income inequality grew: the Gini coefficient for market incomes increased considerably, from 0.439 to 0.499 in the period from 1985 to 2004. While some of this more unequal distribution of market incomes was balanced by redistribution through taxes and transfers, the growth had an influence on distribution of disposable income as well, for which the Gini coefficient increased from 0.251 to 0.285 in the same period. Percentile ratios indicate that this redistribution was primarily at the expense of low income households, while data on top income shares shows that the upper 10 per cent gained strongly. While the top-10 income share fluctuated between 30 and 33 per cent from 1960 until about 1995, after this a rapid increase to 40 per

[72] Own calculations based on data from Deutsche Bundesbank (2017) and Statistisches Bundesamt (2018).
[73] These trends are generally matched by external financial liabilities, however, on a lower level.
[74] Own calculations based on data from Deutsche Bundesbank (2017).

cent in 2008 can be observed.[75] This is confirmed by Dustmann et al. (2014), who examine data on wage growth for West Germany. They find that for the 15th percentile real wages fell dramatically from the mid-1990s. Starting in the early 2000s, median real wages had to take losses and only wages at the top of the distribution continued to rise.

Hein and Detzer (2015) examine the role of financialization and some trends which are commonly associated with economic policy changes towards neoliberalism on the change in functional income distribution in Germany. They find that these trends affected the labor income share through three channels. Firstly, a shift in the sectoral composition away from the public sector to the corporate sector contributed to the fall in the wage share. Secondly, that the increases in management salaries, as a part of overhead costs, and the rising profit claims of more powerful shareholders (rentiers) (as described in section 4.3.2) led in sum to a decline in the wage share. Management salaries are part of the wage share in the national accounts. Therefore, the share going to direct labor fell even more drastically. Finally, a range of phenomena associated with financialization and neoliberalism weakened the bargaining power of labor and so contributed to the fall in the wage share: the authors identify the rise of shareholder value in non-financial corporations and the increasing short-termism as important drivers. However, the downsizing of the government in terms of public sector employment and active demand management, increasing financial and trade openness, and deregulation and liberalization of labor markets are also identified as further channels.

4.4 Germany's long run macroeconomic development before the crisis

The overview in the previous sections shows that financialization has only affected certain parts of the German economic system. Despite strong attempts by the government, some private actors, and the international and European influences, financialization of the financial sector remained limited. As reported earlier, there has been a bifurcation in the financial system in which only the larger banks show strong signs of financialization, while for a large part of the financial system, which is responsible for the bulk of credit supply to the rest of the economy, financialization is a less widespread phenomenon. Likewise, strong tendencies towards financialization seem to have affected primarily certain large firms in the non-financial sector, while the significant sector of small and medium sized companies was less affected. Nevertheless, macroeconomic investment rates were negatively affected, in line with the financialization hypothesis. What distinguished Germany from many other countries was the relatively low financialization of the household sector and the absence of credit financed consumption booms. In terms of inequality, Germany followed the international trend and saw quite substantial increases in personal income inequality and an increasing profit share to which financialization and the shift towards a more neoliberal economic policy have contributed.

The trends we have discussed for the different sectors are reflected in Germany's macroeconomic development. They affected real GDP growth, its composition, and the financial balances, supporting the occurrence of an export-led mercantilist growth model in Germany. Table 1 displays average real GDP growth rates as well as growth contributions over the trade cycle. Looking at the two trade cycles from the early 1990s to the crisis, which we consider the period when the relevant changes towards financialization occurred, a considerable slow-down in growth is registered. It is also remarkable that a

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[75] See Tables 1 to 3 and Figure 1 in Hein and Detzer (2015) for the data presented here.

relevant shift in growth contributions took place. While growth in the periods before was based primarily on domestic demand with the balance of goods and services never contributing more than 10 per cent of total GDP growth, the share of growth coming from net-exports increased to 33 and 40 per cent in the two trade cycles from 1993 to 2008. At the same time growth contributions from gross fixed capital formation and private consumption slumped. We have discussed earlier how financialization in the firm sector has contributed to the slowdown in accumulation and how financialization and the associated increases in income inequality have led to higher savings rates in the private household sector. Hence, with public consumption also growing slowly, the period of financialization in Germany is associated with a heavy reliance on net-exports for growth.

Table 1: Real GDP growth in Germany (in per cent) and growth contributions of the main demand aggregates (in percentage points), 1961–2013, cyclical averages

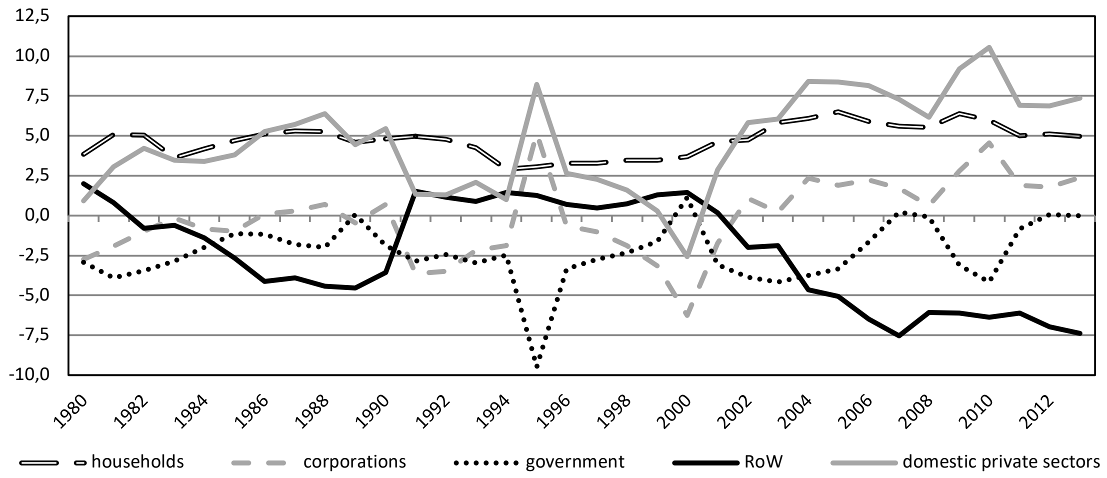
	1961–1966	1967–1974	1975–1981	1982–1992	1993–2002	2003–2008	2009–2013
Real GDP growth, per cent	4.49	3.82	2.40	2.77	1.40	1.59	0.66
Growth contribution of (percentage points)							
Domestic demand including stocks	4.49	3.59	2.36	2.52	0.93	0.94	0.58
Private consumption	2.47	2.25	1.55	1.42	0.72	0.28	0.60
Public consumption	1.03	0.84	0.70	0.21	0.28	0.17	0.26
Gross fixed capital formation	1.28	0.47	0.38	0.69	0.04	0.40	-0.10
Change in inventories and net acquisition of valuables	-0.29	0.03	-0.28	0.20	-0.11	0.10	-0.19
Balance of goods and services	-0.01	0.23	0.04	0.25	0.47	0.64	0.08

Notes: The beginning of a trade cycle is given by a local minimum of annual real GDP growth. 1961 – 1966 and 2009 – 2013 are incomplete cycles.

***Source*: Detzer et al. (2017: 278); Data from European Commission (2014).**

These developments are reflected in the financial balances (Figure 1). The financial balance of the rest of the world in the 1990s was positive, reflecting Germany's negative current account balance during the reunification boom and in the years following. With the current account balance reversing, due to a strong expansion of net-exports from 2001 onwards and since 2004 also due to increasingly positive balance of primary incomes (Detzer and Hein 2016), financial balances of the Rest of the World turned negative and reached a low of -7.5 per cent in 2007 before the crisis. Counterparts to those negative balances in the 2000s were the surpluses of the private household sector, which increased slowly after the mid-1990s and then more rapidly from the early 2000s on. The weak investment spending of corporations led to a surplus in this sector since the early 2000s as well. These rising private surpluses were partially balanced by public sector deficits in the first half of the 2000s. From 2005 on, however, the public sector narrowed its deficits and in 2007 it registered a small surplus. In the course of the 2000s Germany accumulated a large positive net international investment position due to these overall surpluses (Deutsche Bundesbank 2017). Hence, looking at the classification of macroeconomic regimes, which were observed in the era of financialization and which we discussed in section 3.2, for the two trade cycles before the crisis Germany can be described as an export-led mercantilist economy (Detzer and Hein 2016). In fact Germany's large current account surplus was one of the main contributors to global and EU trade imbalances observed before the crisis (IMF 2017).

Figure 1: Financial balances, Germany, 1980–2013 (per cent of nominal GDP)



Notes: West Germany until 1990. In 1995 the deficit of the 'Treuhandanstalt' was shifted from the corporate sector to the government sector. In 2000 the payments for UMTS licences from the corporate sector to the government sector are included. RoW is 'Rest of the World'.
Source: **Detzer et al. (2017: 278); Data from European Commission (2014).**

5 Summary and Conclusion

In this article we examined the spread of financialization in Germany before the financial crisis. In particular, we wanted to clarify how the prevailing institutional structure and its changes had contributed to or countervailed the spread of financialization and how it has shaped the specific German variant of financialization. For this end, we have combined the rich literature on Germany's institutional structure with the more macroeconomic oriented literature on financializaton. The combination of those different perspectives has helped to shed light on the reasons for the spread of financialization and the specific forms it has taken in Germany. It has also shown how important a deep knowledge of the financial and economic structure of a country is to fully grasp the development of financialization in countries all over the world.

In the article we first reviewed the literature on financialization and structured the variety of phenomena associated with financialization along the dimensions: financial sector, non-financial sector household sector, inequality, international and financial stability. In addition, we discussed how those phenomena have contributed to the emergence of different macroeconomic regimes.

Thereafter, we focused on Germany. We first shortly depicted the historical peculiarities of the German financial and economic system, e.g. the three-tier banking sector and the German corporate network. Subsequently, we looked at important drivers for change within this system and discuss how those have supported the spread of financialization. Here we first looked at changes in Germany's international environment, as for example the internationalisation of capital markets and the international convergence of rules for certain areas of financial regulation or the influence of Germany's membership in the European Union and then focused on national drivers for change. We discussed how changes in the strategies of banks and important regulatory changes have facilitated the dissolution of the German corporate network, supported the emergence of a market for corporate control, and have spread certain corporate ideologies, such as shareholder value management, or instruments, such as share buy backs, which are all seen as important for the diffusion of financialization.

In the second step we used the framework established in section 3.1.1 – 3.1.6 to systematically compare the trends in Germany with the financialization trends found in the literature. The analysis has shown that financialization was constraint and shaped by the specific German institutional structure. For example, while in the financial sector we found a clear trend towards increasing financialization, this trend is mostly constrained to the big international banks. The large sector of cooperative and savings banks seemed largely unaffected. We found a similar bifurcation in the non-financial corporate sector: larger, listed firms with widely dispersed ownership tended to exhibit a higher degree of financialization and shareholder value orientation. In contrast, small and medium sized companies, which were too small to access financial markets and continued to rely on bank finance, as well as firms with dominant block holders seemed less exposed to financialization. However, on the macroeconomic level, Germany followed the international trends: corporate investment rates fell, and inequality increased. In contrast to many other countries, financialization has not led to asset price and debt led consumption booms in the German household sector. Finally, we examined the overall macroeconomic development, which emerged from these sectoral trends. Germany before the crisis was characterized by low growth, a high dependence on export-surpluses and weak domestic demand growth. Given these characteristics, Germany could be categorized as export-led mercantilist according to the classification presented in section 3.2.

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