Financialisation, Financial Crisis and Inequality

Malcolm Sawyer

1 Introduction

Financialisation involves the rising economic importance and the social and political power of finance and of the financial sector. Financialisation and the general expansion of the financial sector have been key features of capitalist economies for at least one and half centuries, though financialisation has proceeded with varying intensities and with some reversals. The specific ways in which financialisation has proceeded have varied across countries and over time. It is generally recognised that financialisation in the present era (broadly since the late 1970s) has been intertwined with globalisation (and indeed financialisation has been close to a global phenomenon, particularly in the first decade of the new millennium) and neo-liberalism. The period since circa 1980 has generally seen rising inequality in the Western

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industrialised economies[1] and the relationship between financialisation and inequality is the focus of this chapter. The rising economic and political power of finance and the financial sector would be anticipated to impact on the distribution of income, and a major purpose of this chapter is indeed to explore the variety of routes through which financialisation impacts on dimensions of income distribution.

The structure of this chapter is as follows. In the next Sect. 2, the nature and features of financialisation in the present era are outlined. Section 3 sets out some of the main trends in income distribution and inequality over the past three decades. Section 4 explores the links between the financial sector and inequality of income and earnings, and specifically the extent of inequality within the financial sector and the degree to which inequality in the financial sector contributes to overall inequality. In Sect. 5, the focus of attention is on the processes of financialisation and the distribution of income, and this is followed by remarks on stratification in the financial sector in Sect. 6. One dimension of financialisation is financial deepening and in Sect. 7, the ways in which financial deepening can impact on inequality and poverty are explored. Section 8 reviews the links between inequality and financial crisis and also remarks on the empirical findings between financialisation and debt expansion. Concluding remarks are offered in Sect. 9.

2 Financialisation in the Past Four Decades

Financialisation is viewed here in terms of a modification of a well-known quote from Epstein (2005). Financialisation is perceived in terms of the increasing role of financial motives, financial markets, financial actors and financial institutions in domestic and international economies, societies, the environment and changing relationships between the financial sector and the real non-financial sector. Financialisation, particularly in terms of the increasing role of financial

[1]See, UNDP (2017) for the inequality in African countries, which presents a rather different picture.

institutions and markets, has been an ongoing process throughout capitalism. Vercelli (2014) identifies two periods of intensive financialisation. The first financialisation is dated from the second half of the nineteenth century to the start of the Great Depression around 1929, with the expansion of the financial sector, a feature of the industrialising countries including those of Western Europe and North America. There was also an international dimension as international trade and lending grew. The second financialisation (also labelled neoliberal financialisation by Vercelli, op. cit.) comes in with the ending of the Bretton Woods fixed exchange rate system, with easing of exchange and capital control, and can be broadly dated from the mid-1970s onwards.

Fasianos et al. (2018), with specific reference to the USA during the twentieth century (plus the first decade of the 21st), identify "four distinct regimes, marked by structural breaks in the institutional setting of the economy, which affected the functioning of the financial sector" (p. 35). They identify a first period lasting from the beginning of the twentieth century until 1933, and the ensuing regulation of the financial sector, notably the Glass-Steagall Act. The second is the remaining years of the 1930s, and the third covers the years of the 'golden age of capitalist development' through to 1972. The fourth period encompasses 1974 to 2010 of 'financialized capitalism'. In the first period (1900–1933), the authors find for the USA that there was dominance of the financial sector with the income share of the financial sector 'moderate high'. There was shareholder orientation with moderate intensity of financial innovation. Household indebtedness was considered moderately high and income inequality high. Free capital mobility prevailed and there was inclination to financial crises. In the next two periods (1934–1940 and 1945–1973), the authors find that there was no financial sector dominance with the income share of the financial sector low. Financial regulation, low income inequality, absence of free capital mobility and low inclination to financial crises were other common features of the two periods. The authors considered that in the 1934–1940 period, intensity of financial innovation was moderate, switching to high in the 1945–1973 period. Household indebtedness moved from low in the earlier period to moderate in the later period. The final period (1974–2010) was judged rather similar to the first

period. The differences, which indicate a more intense financialisation in the recent period, put the income share of the financial sector as high (rather than moderate high), and a high intensity of financial innovation and high household indebtedness.

The present era of financialisation since the end of the 1970s has displayed a range of significant features though the intensity of financialisation in some dimensions has slackened since the global financial crises of 2007–2009.[2,3]

A first feature is the rapid expansion of financial institutions and financial markets, a feature which has been shared with earlier periods of financialisation. However, starting with shares of output and of employment, there is a rather mixed picture. Of ten European countries[4] examined, 7 recorded decreases in value-added share over the period 1995–2007, whereas three recorded increases. In the post-crisis period of 2009–2014, four recorded decreases and six increases. Over the whole period 1995–2014, four recorded decreases and six increases in shares of value added of the financial sector. In terms of employment share, eight recorded declines over the period 1995–2007 and two increases. In the post-crisis period 2009–2014, all but one recorded declines, and over the full period 1995–2014, all recorded declines in employment share of the financial sector. The output share is considerably larger than the employment share (averages in the range 1 ½–2 ¼ times higher), implying substantial higher labour productivity in the financial sector.[5]

Bank deposits relative to GDP are a frequently used measure of the size of the banking system in empirical work on the effects of the

[2]The plural 'crises' is used to signify that there were a number of national financial crises (notably USA, UK, Iceland and Ireland) which interacted and which had contagion effects. The first signs of crisis came in August 2007, reached intensity in autumn 2008 and spilled over into 2009. The term global financial crisis is used, although as Jessop (2013) has argued, it is more appropriate to be called North Atlantic financial crisis.

[3]This listing is something of a reshuffle and elaboration of the listing in Ashman and Fine (2013) and other writings.

[4]Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Spain, Sweden and UK.

[5]There are issues over the measurement of output (value added) in the financial sector: see, for example, Christophers (2011).

financial sector on economic performance. Bank loans are generally correlated with bank deposits as the major items on the asset and liability sides of the banks' balance sheet. When bank deposits are the major vehicle for savings, then cumulated household savings would also be correlated with bank deposits. The growth of the banking sector (as measured by bank deposits relative to GDP) for 12 countries is illustrated in Fig. 1a. In the countries reported on there, bank deposits (relative to GDP) had (using median) gone from 33% in 1960 to 67% in 1980, 106% in 2000, peaked in 2009 at 125%, later resuming rise to 131% in 2014. The statistics on bank deposits (relative to GDP) are often used in empirical work as a key measure of financial development or financial deepening to which reference is made below.

Stock market capitalisation (again relative to GDP) is a further statistic often used to measure financial development. The time path of stock market capitalisation is illustrated for the same countries in Fig. 1b, and the strong, if volatile, growth of stock market capitalisation is clearly illustrated. From a median of 22% in 1975 (when the data series begins and when many stock markets had slumped following the oil crisis), it rose to 46% in 2000, peaking in 2000 at 115%, and after a dip moving to 108% in 2007, and recording 89% in 2014.

These statistics on bank deposits and stock market capitalisation can illustrate that financial markets have tended to grow faster than financial institutions, and a shift from bank-based financial systems towards market-based ones.[6] The rise of bank deposits and stock market capitalisation also illustrate the rise in financial assets relative to GDP, and alongside a rise in financial liabilities (one dimension of which, household debt is discussed below).

During the present era of financialisation, there has been the expansion and proliferation of financial instruments including financial derivatives and securitisation (including asset-based securities, collateralised debt obligations CDOs). As Lindo (2018, p. 1) remarks, "the late 1980s marked the beginning of a new era in derivatives trading which has

[6]For overall discussion on and critique of bank-based vs. market-based financial systems, see Sawyer (2014).

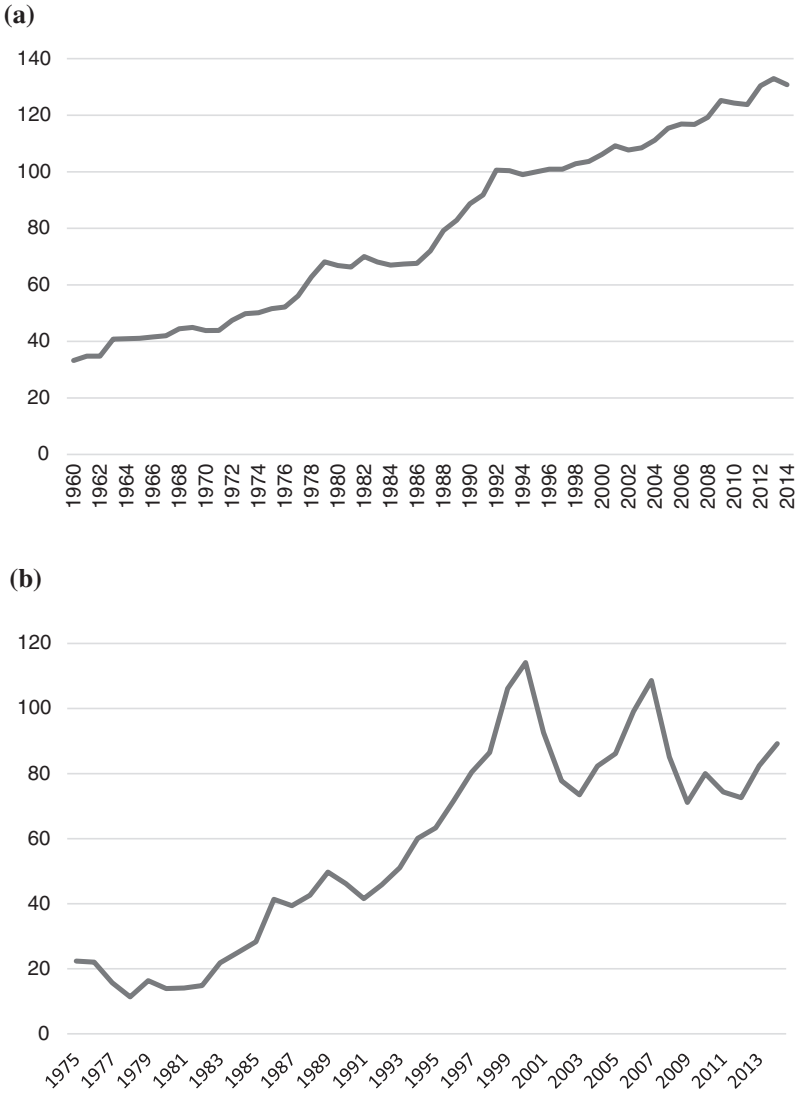

Fig. 1 Trends in size of financial institutions. **a** Bank deposits: GDP (%). Median of 12 countries. **b** Stock market capitalisation to GDP (%). Median of 12 countries (*Countries covered* Australia, Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, UK, USA. *Source* Based on data from Financial Development and Structure Dataset, compiled by Aslı Demirgüç-Kunt, Martin Čihák, Erik Feyen, Thorsten Beck, Ross Levine, June 2016)

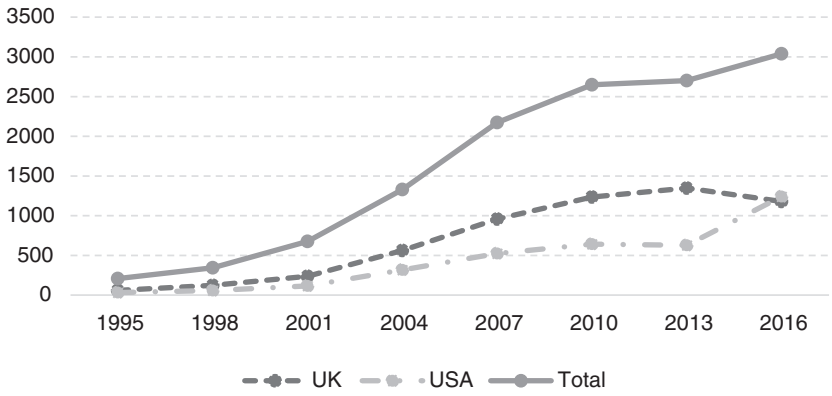

Fig. 2 Derivatives OTC $billion (*Source* Calculated from BIS data)

seen rapid growth in the volume and types of derivatives traded and the emergence, and use by market participants, of a vast literature of valuation and risk management models". Figure 2 illustrates the growth of the derivatives (OTC), and its concentration in the UK and USA. Following the financial crisis, derivatives markets continued to grow albeit at a slower pace. An over five-fold increase in the nine years to 2007 was followed by a 40% increase in the subsequent nine years.

The complexity of the financial instruments has meant that the risk evaluation of the financial instruments becomes virtually impossible. The development and growth of financial derivatives and securitisation (such as mortgage-backed securities) have been particularly significant in their consequences for risk and crisis. Kay (2015) argues that "volumes of trading in financial markets have reached absurd levels – levels that have impeded rather than enhanced the quality of intermediation and increased rather than diversified the amount of risk to which the global economy is exposed. The capital resources needed to reconcile these trading volumes with stability have not been available; nor will they ever be" (pp. 297–298). The complexity of financial products feeds into financial instability with resulting damage on the non-financial economy.

The financial assets of financial corporations other than banks (in trillions of dollars) over the period 2002–2015 are illustrated by category

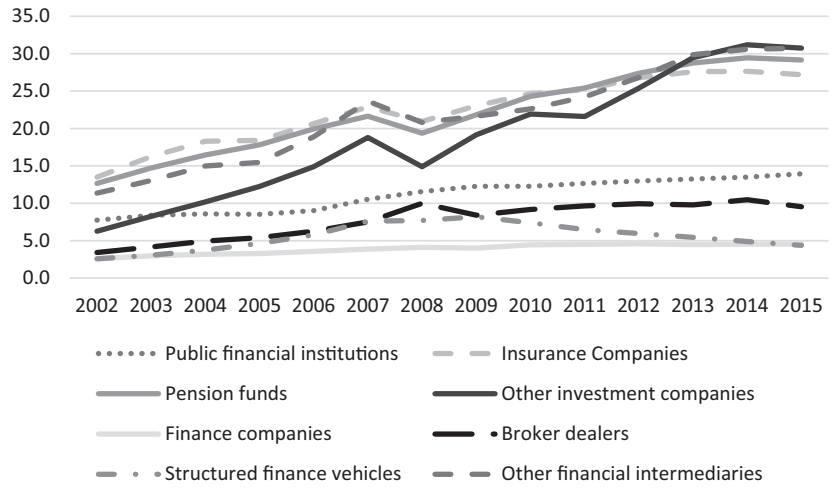

Fig. 3 Assets of financial corporations $trillions (*Source* Dataset accompanying Global Shadow Banking Monitoring Report 2016 from Financial Stability Board [available at http://www.fsb.org/2017/05/global-shadow-banking-monitoring-report-2016-monitoring-dataset/])

in Fig. 3, which serves to illustrate the rapid growth of the different forms of financial institutions and the extent to which growth continued after the global financial crises. The data refer to what is termed the 28-group,[7] which comprise the major financial centres. Banks refer to deposit-taking corporations and by way of comparison, their financial assets were $52 trillion in 2002, rising to $119.9 trillion in 2008 and then $129.6 trillion in 2015. Central bank financial assets rose substantially in the 2010s, reflecting quantitative easing from $4.5 trillion in 2002 to $13.2 trillion in 2008 and then $21.1 trillion in 2015.

The rise of household debt has often been seen as part of the processes of financialisation, and is part of the increased involvement of households with the financial sector. The significance of household debt for involvement in credit bubbles in periods when there is rapid

[7]Argentina, Australia, Belgium, Brazil, Canada, Cayman Islands, Chile, China, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Turkey, the UK and the US.

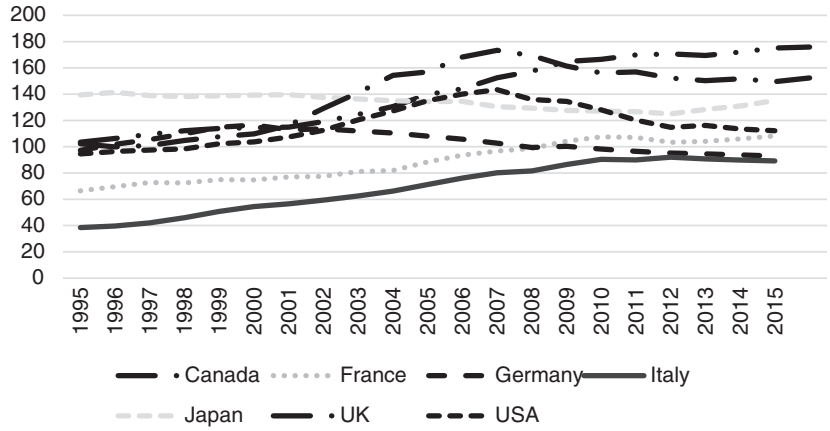

Fig. 4 Household debt as per cent of disposable income (*Source* Calculated from OECD Economic Outlook database)

expansion of household debt is discussed below. Household debt has also been viewed as a means by which households have responded to depressed incomes and rising inequality, which is also discussed below. Over the period 1995–2007, all of the countries in Fig. 4 except Japan showed an increase in household debt (relative to disposable income): the unweighted average increased by 50 percentage points which corresponded to a relative increase of over a half. In the period from 2007 to 2015, the debt ratio was rather flat: indeed, the unweighted average in 2015 was within 0.2 percentage points of the figure for 2007.

Financialisation has been related by many to the rise of rentier income. Rentier income is envisaged in terms of receipt of income and passivity. Rentier income can be viewed through the lens of the recipient—that is in terms of income received in a passive manner based on supply of funds. But rentier income can be viewed in terms of payments made by corporations and others to the supplier of funds. In a world where there were no financial intermediaries, then the payments made out by corporations would be equal to receipt of income by households. However, in a world where there are financial intermediaries, then much of the payment of rentier income goes in the first instance to financial institutions. In turn, financial institutions

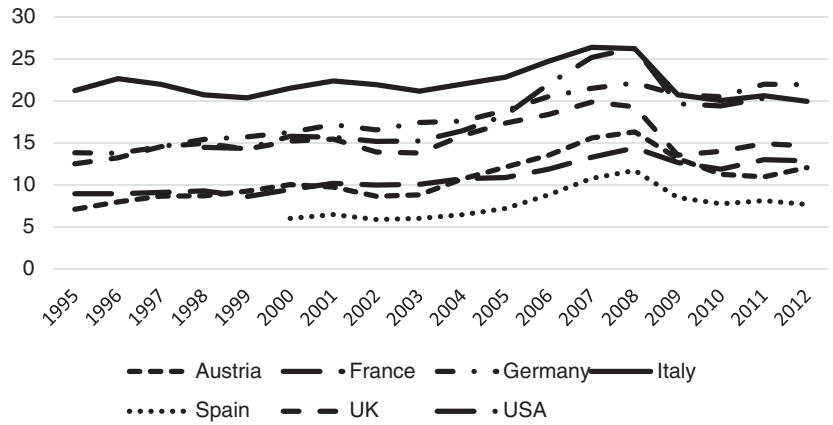

Fig. 5 Rentier income of households as % GDP (*Source* Calculated from data downloaded from http://stats.oecd.org/BrandedView.aspx?oecd_bv_id=na-data-en&doi=data-00820-en#, October 2017)

make charges for their services, and make rentier income payments to households. Further, households themselves are paying interest on past borrowing and those interest payments are at least indirectly received by other households, though again would in general pass through financial institutions. In Fig. 5, statistics are given for rentier income as received by households, which differs from rentier income as paid out by corporations. It is measured in current prices, and as such makes no allowance for inflation (so, interest payments are in nominal terms rather than real terms) nor does it incorporate capital gains. The general picture is one of rentier income rising up to the financial crisis with some declines thereafter arising from the low interest rate environment.

A remarkable feature of the era of financialisation since circa 1980 is that it has been a near global phenomenon, in that the financial sector has grown rapidly in many countries, although the liberalisation of the financial sector and its rapid growth generally started later. There has been what may be termed a globalised financialisation as financial flows between countries increased often fostered by relaxation and removal of exchange controls.

UNCTAD (2017) use IMF data on value of assets of financial institutions relative to GDP, values of cross-border assets and liabilities

(relative to GDP), "financial concentration and power… approximated using a variable that measures the assets of the top five banks relative to GDP" (p. 96). The statistics mapped in their Figs. 5.1 and 5.2 show in their words "the dramatic acceleration of all indicators of financialization [for all countries] since the 1990s" (and their data extend back to 1975). Their data show that there is a substantially greater degree of financialisation in OECD countries than in developing and emerging economies. It is also argued that there was some deceleration of financialisation after the financial crises of 2007–2009 in OECD countries, which was not observed in developing countries.

The processes of international financialisation are argued by Bortz and Kaltenbrunner (2018) to involve more than simply an increase in cross-border capital flows. It also "entails distinct qualitative changes in the way economic agents are integrated into international capital markets" (Abstract). In a similar vein, Kaltenbrunner and Painceira (2018) argue that processes of financialisation in emerging economies are akin to those observed in industrialised capitalist economies and "are fundamentally shaped by their subordinated integration into a financialised and structured world economy" (p. 1).

The structure of the banking sector in particular has tended to change in the directions of becoming more concentrated (though some, such as the UK, were already highly concentrated), less regionalised as regional banking gave way to national banking and more internationalised. Detzer et al. (2013), drawing on ECB data, report unweighted average five-firm concentration ratio for the euroarea at 45.0% in 1997 rising to 57.0% in 2009. Relating to the period since 2003, ECB (2017) report "a gradual increase in market concentration" (p. 47).

Financial institutions have often been a mixture of privately owned mutual and cooperative-owned and state-owned. A feature of the present era of financialisation has often been some decline of mutual and cooperative ownership and particularly the role of state ownership.

The relationships between the financial sector and the non-financial sector evolve and change, with consequences for the ways in which financialisation operates. A reflection of such changes has been the view that one of the central features of financialisation is the pursuit of shareholder value by financial institutions, which have increasingly become

owners of equity. The pursuit of shareholder value "is not a neutral concept, but an ideological construct that legitimates a far-reaching distribution of wealth and power amongst shareholders, managers and workers. Empirical phenomena interrogated in this body of work include executive compensation practices, corporate restructuring, shareholder activism and other investor behaviour, as well as the spread of the shareholder value ideology from the USA to other political economies" (Van der Zwan 2014, p. 102).

Increasing pursuit of shareholder value enhances the short-termism of management, and it is argued leads to "rising dividend payments; increasing interest rates and interest payments, …; increasing top management salaries; increasing relevance of financial as compared to real investment and hence of the financial sector relative to the non-financial sector; hostile takeovers, mergers, and acquisitions; and liberalisation and globalisation of international finance and trade" (Hein 2015, pp. 924–925).

During this second period of financialisation, banking and financial crises became a common occurrence—424 crises were recorded by Laeven and Valencia (2013) in the period 1970–2011, of which 147 were banking crises, 211 currency crises and 66 were sovereign debt crises. Particularly large financial crises include Mexico/Latin America 1994 and the East Asian crisis 1997. "The existence of structural breaks incidence and onset of financial crisis variables indicate a markedly increased trend in financial crisis since the early 1980s" (Eichacker 2017, p. 58). Financial crises, particularly in the banking sector had major negative impacts on employment and output. The global financial crises of 2007/2009 had global effects—output in OECD countries declined by 3.6% in 2008–2009, unemployment rose by a third (6–8.1%) and sharp decline of international trade of over 11%.[8]

Van der Zwan (2014) lists as the third characteristic of financialisation the 'financialisation of the everyday'. This includes the increasing involvement of households in financial markets and financial decision-making through, for example, household debt and home

[8]Figures taken from OECD *Economic Outlook*, June 2013.

mortgages, private insurance and private pension plans and a range of other financial products. There has been the penetration of finance into a widening range of both economic and social reproduction—housing, pensions, health, etc. as a continuing feature of financialisation, leading to societal transformation. The trend away from social provision of pensions to private provision through funded schemes draws people into complex financial decisions and expands the scale of the financial sector.

These are general features of financialisation, but the growth of financial sectors has been pervasive across the world. The specific forms they take vary from country to country, and the timing of these developments similarly varies. The term 'variegated financialisation' can be used to signify the pervasive but differentiated forms of financialisation. Brown et al. (2017), and Ferreiro and Gómez (2016) provide evidence on the spread of the financial sector and the differences across countries leading into notions of variegated financialisation.

3 Trends in Income Distribution and Inequality

It has often been noted that the present era of financialisation, particularly in Western Europe and North America, has gone alongside rising levels of inequality of income and wealth. The trends have not been uniform, but, for many countries, inequality was higher in the mid-2000s than in 1980. It has also often been noted that (at least with reference to the USA) inequality (particularly relating to the share of the top 1%) had prior to the global financial crises risen to a level not seen since the late 1920s. It has then been argued that the high and rising level of inequality was viewed as a significant contributory factor in the generation of financial crisis, an argument which is examined below.

The trends for income inequality are here summarised to indicate that indeed inequality of income has been generally rising in industrialised countries. In Fig. 6, data are given on nine Western industrialised countries on inequality using the Gini coefficient as a measure of inequality. There is a general upward trend across the nine countries examined.

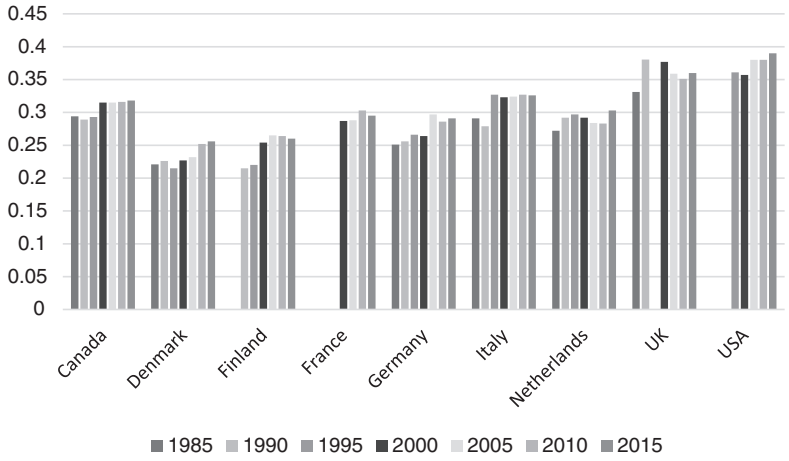

Fig. 6 Gini coefficient: post-tax, post-transfer income figures for Italy refer to 1984; 1991; 2014; for Denmark: 2013; for Germany 2014 (*Source* Calculated from WID Dataset World Wealth and Income Database: downloaded from http://wid.world/, February 2018)

The data source for Fig. 6 also provides measures of inequality based on the ratio of income share of the top decile to share of the bottom decile and the Palma ratio between the income of the top 10% and the income of the bottom 40% showing similar trends. The UK has a rather particular pattern, in that income inequality (on the measures examined) rose sharply during the 1980s under the Thatcher government and this is reflected in the figures here for 1985–1990.[9] After the early 1990s, income inequality in the UK has flattened out.

Figure 7 displays the share of the top 1% in incomes for six major countries since 1979. The general upward trend across all these countries is readily apparent with particularly sharp rises in the USA and in the UK until the global financial crises (and unlike the other measures

[9]In the data set used, figures for UK prior to 1985 were not reported. The UK Office for National Statistics does provide data: for example, the Gini coefficient for disposable income rose from 0.274 in 1979 to 0.368 in 1990, fluctuating thereafter with a recorded value of 0.322 in 2016/2017.

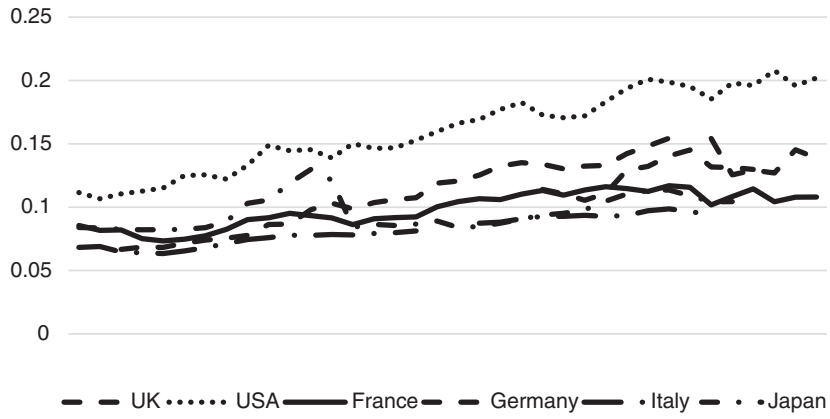

Fig. 7 Income share of top 1% (*Source* Calculated from WID Dataset World Wealth and Income. *Database* downloaded from http://wid.world/, February 2018)

of income inequality, the share of the top 1% rose throughout the 1980s, 1990s and into the 2000s).[10]

There have also been marked shifts in the distribution of income between labour and capital with a general downward trend in labour's share and corresponding rise in profits. For evidence on these trends in the distribution of income, Tridico and Pariboni (2018) in this volume cite a number of sources backing up the statement of generally falling share of labour and also produce their Fig. 2 in support.

4 The Financial Sector and Inequality of Income and Earnings

The financial sector has acquired the reputation of paying high incomes to bankers and for the financial sector having high levels of income equality within it, and for paying higher salaries than other sectors.

[10]The figures for Germany before 2001 are only available every three years, and those figures do not show up in this chart. In 1980, the share was 0.1072, and 0.1144 in 1989, virtually the same as the figure for 2001.

The enlargement of the financial sector can contribute directly to the overall level of the inequality of earnings and incomes through two routes. First, insofar as employment in the financial sector expands and the financial sector displays higher than average levels of inequality, then overall inequality of earnings will rise. Second, insofar as there is rising inequality of incomes within the financial sector, there could be a further contribution to higher inequality. In this section, how far those two routes of the financial sector contribute to inequality are examined.

The nature and source of high earnings in the financial sector are also highly significant, particularly in consideration of the efficiency of the financial sector. If there are higher and rising earnings, do they represent payment for enhanced productivity and effectiveness with links between wages, productivity and performance? Alternatively, do higher earnings in the financial sector reflect the power and ability of the top earners within the financial sector to extract economic rents, which would be rather in line with ideas on financialisation and the power of the financial sector?

We start by reviewing studies on inequality within the financial sector and the contribution of inequality within that sector to overall inequality.

Denk (2015, p. 6) reports that employees in the financial sector are heavily concentrated at the upper end of the overall earnings distribution. He finds the receipt of 'wage premia' by employees in financial institutions, which means that workers with similar observable characteristics including age, gender, education and experience are paid more in the financial sector than in other sectors, which can be seen as indication of rent extraction by financial sector workers. Two-thirds of the 'wage premia' in the financial sector are received by financial sector employees who are amongst the 10% of all workers with the highest earnings. Denk (2015) argues that it is these wage premia which account for most of the contribution of the financial sector to inequality of earnings. Some rough calculations undertaken by Denk (op. cit.) suggest that about half of the overall negative relationship between finance and income inequality can be explained by the concentration of financial sector employees at the upper end of the earnings distribution and sizeable wage premia for financial sector workers, particularly for

top earners. Men employed in the financial sector are reported to earn on average a 22% higher income than women with the same profiles in terms of age, education and experience, which Denk (2015) reports as similar to that found in other sectors. However, in finance, the wage gap between men and women employed in finance increases with income and is higher than in other sectors at the top.

Bakija et al. (2012) examine patterns of income growth between 1979 and 2005 for top earners by occupation drawing on USA income tax returns. They report that executives, managers, supervisors, and financial professionals accounted for about 60% of the top 0.1% of income earners. Further, those groups account for 70% of the increase in the share of national income which went to the top 0.1% of the income distribution between 1979 and 2005. They identify that 13% of the top 1% of earners were in the financial sector and 18% in the top 0.1%. In their data, the share of the top 1% rises from 9.72% in 1979 (income including capital gains; 8.93% excluding capital gains) to 20.95% in 2005 (16.3% excluding capital gains). Income of financial professionals accounted for around 9% of the income of the top 1% in 1979 rising to 16% in 2005 (figures are little different whether or not capital gains included in income).

Philippon and Reshef (2012) find that wages in finance relative to nonfarm sector followed a U-shaped relationship between 1909 and 2006. In 2006, they report that average incomes in financial sector were 70% above those in the rest of the private sector. After adjustment for education, incomes were comparable in the financial sector and the rest of the private sector, but the premium in the financial sector averaged 50%. The differences were more pronounced at the top of the income distribution where the wages of top decile in finance grew to become 80% more than the wages of top decile of earners elsewhere. By 2005, executives in finance were earning 250% more than executives elsewhere, and it was found to be a 300% premium for workers in finance in the states of New York, New Jersey and Connecticut. They ascribed around half of the increase in the average premium to earnings risk, and one-fifth to changes in the size distribution of firm. They also argue that changes in financial regulation are important determinants of these changes in earnings in the financial sector. They further find that

the financial sector accounted for between 15 and 25% of the rise in income inequality between after 1980.

Godechot (2012) reports that the share of the top 10% in wages in France rose from 26.45% ion 1996 to 27.74% in 2007; the corresponding figures are: for top 1%: 5.74–7.06%; top 0.1%: 1.20–2.01%; and top 0.01%: 0.27–0.65%. The financial sector's contribution to these rises in top income shares was 51% (top 10%), 47% (1%), 67% (0.1%) and 89% (top 0.01%).

Bell and Van Reenen (2014) note that the top 1% (by earnings) of workers increased their share of income from around 6% of total UK income in the late 1970s to 15% by the end of the 2000s. They further note that on this measure, the level of inequality had returned to the level of the inter-war years with the notable difference that while in the inter-war years, the high-income group was the rentier class based on the return on fixed capital, in the late 2000s, the high-income group is primarily high-wage workers. "In 2008, 28% of all top percentile earners in the UK were London bankers. But this dramatically understates their importance in the rise in overall wage inequality during the last decade. We estimate that somewhere between two-thirds and three-quarters of the overall increase in the share of wages taken by those in the top percentile have accrued to bankers" (Bell and Van Reenen 2014, p. F19). The term 'bankers' was used in Bell and Van Reenen (2014) to refer to the employees in the financial intermediation sector which also includes fund management and insurance businesses.

Philippon and Reshef (2013) find that wages in the financial sector are generally higher than in other sectors and have been rising in relative terms. There is an increasing trend over the period 1970–2005 of average wages in the financial sector relative to other sectors in USA, Netherlands, France, Germany, Denmark, Canada and Finland, and a mixed trend in Austria, Belgium, Japan, UK and Sweden. Throughout, the relative wage of workers in the financial sector is above 1 and as high as near 1.8. They argue that the increase in skill intensity cannot explain wages in the financial sector. For the relative wages of skilled workers in the financial sector, six countries are reported to have an increasing trend and five a mixed trend (and one, Canada, for which data are not available). With the exception of Finance in the first half

of the period examined, the average wage of skilled workers in the financial sector is greater than average for other skilled workers.

Bivens and Mishel (2013, p. 66) calculate for the USA that the unadjusted ratio of financial sector pay (annual compensation per full-time employee) relative to pay of workers in the rest of the economy fluctuated below 1.1 between 1952 and 1982, and then gradually rose to reach 1.83 in 2007.

Tomaskovic-Devey and Lin (2011) report that just under a quarter of GDP and more than a quarter of profits accumulated in a definition of the financial sector broader than that used above. They report that in the American financial sector, employee compensation rose from being close to the average in 1980 to around 60% higher by 2008. They ascribe this shift as happening through decreases in market competition and regulation which provided the conditions of enhanced institutional market power to enable such a transfer of income.

Sum et al. (2008) consider growth of weekly earnings in the USA over the period 2002–2007. They report that typical full-time wage and salary workers had no increase in their weekly earnings over the period in spite of rising productivity and generally increasing employment opportunities. Non-supervisory workers' weekly earnings rose by $6, while earnings of all wage and salary earnings including that of manager and executives rose by over $60, which represented a gain of about 7% for this group of workers but a large portion (over one-third) of it was due to earnings gains of workers in the nation's investment banking and securities industries. The mean weekly earnings in investment banking and securities industries rose by $2408, a 54% increase. The weekly earnings (including bonuses) of wage and salary workers including manager and executive in the investment bank and securities industries in Manhattan ('Wall Street') rose by $8028, a 90% increase.

Kaplan and Rauh (2010) consider the degree to which inequality at the very top of the income distribution can be attributed to top executives of nonfinancial firms, financial service sector employees from investment banks, hedge funds, private equity (PE) funds, and mutual funds, lawyers and professional athletes and celebrities. Two measures of pay were considered—realised compensation which includes options exercised during the year, and ex ante compensation which uses

estimated value of options granted during year. They study earnings of four groups: non-financial-firm top executives (Main Street), investment bankers, private equity and mutual funds investors (Wall Street), corporate lawyers, sports stars and celebrities. They calculate that these groups represent between 15 and 26.5% of the individuals who are in the top 0.1% of adjusted gross income. Their estimation is that Wall Street-related individuals form a higher proportion of the top gross income brackets than is the case for nonfinancial executives of public companies. They consider their assumption tends to understate position of Wall Street executives. In contrast to the representation of top public company executives in the top fractions of the income distribution, they find that the contributions of hedge fund managers, private equity investors, venture capitalist investors, and corporate lawyers have increased substantially over the past ten to twenty years, and likely by a greater amount than the top executives.

Lindley and McIntosh (2017) report that the wage premium in the UK finance sector is large (of the order of 40%) and increasing. They find that the largest returns within the financial sector are received by London-based male graduates in their 40s, and who are employed as dealers or brokers in the security broking sector. The premium is observable across different sub-sectors of finance and different occupations and different qualification levels. The wage premium is found across most other OECD countries. The wage premium "seems to be a pervasive feature of remuneration in the financial sector" (Lindley and McIntosh 2017, p. 589). They find that the UK financial wage premium has continued to rise after the 2007/2009 financial crisis. Lindley and McIntosh (2017) consider explanations of the financial sector wage premium including task-biased technical change with substitution of routine labour by capital equipment, skill intensity and cognitive abilities. They conclude that none of the possible explanations as to why finance sector workers are paid more than non-finance sector workers are robust. They "propose that the finance sector pay premium is, at least in part, due to the rent-sharing of that sector's profits" (p. 589), and argue that such a conclusion is supported by the prevalence of the pay premium across jobs at "all points of the occupation hierarchy, for workers of all skill types, and at all points of the wage distribution" (p. 589).

Bivens and Mishel (2013) discuss what may be termed economic rents—as the income received in excess of what would be needed to induce the person to supply labour to the specific activity or sector. They admit that the "evidence on rent-shifting behaviour should be viewed not as conclusive, but as highly suggestive" (p. 65). They point to the rise in the top incomes in the financial sector alongside its general expansion coinciding with regulatory changes in the direction of de-regulation and rising concentration in the financial sector. Further, "some potentially substantial share of the income for large financial institutions is based on implicit insurance against bankruptcy … that large financial firms receive from the government … with some financial firms seem to extract large rents largely by hiding financial risk, rather than managing it" (p. 65).

As Spreafico (2018) argues, the rapid rise in salaries of CEOs in general (and not just in the financial sector) in the past three decades cannot be explained on marginal productivity lines, as this rise in salaries is not matched by increases in the efficiency of firms or growth, and her argument can be extended to the salaries and bonuses of the top income receivers within the financial sector. Spreafico (2018) presents a full range of arguments against the links between wages and marginal productivity, which apply with full force in the financial sector.

Alvaredo et al. (2013) note the differences in the experiences of countries with regard to the share of the top 1% with marked rises in USA and UK and modest rises in other large industrialised economies. They argue that the explanation for the rising inequality in USA in particular cannot be explained by relying on forces common to industrialised economies such as impact of new technologies, globalisation, and demand and supply of skills. They advance the ideas that tax policy, changes in bargaining power and greater individualisation of pay, capital income and inherited wealth and the closer correlation between earned income and capital income help to explain the rise of the share of the top 1%.

Nau (2013) labels those households that receive some portion of their income from wealth as 'investors'. "This conceptualization differs from capitalists, a more commonly used term to indicate membership in a propertied class, in the following ways: (1) the universe of

investments encompasses any sort of asset that can generate income; and (2) households can be investors and workers at the same time" (p. 441). In his empirical work, the focus is on the two decades of the 1990s and the 2000s in the USA. He argues that the importance of investment income has increased greatly in recent decades. Over the period 1992–2010, non-investment income among the top 1% was generally stagnant. He finds confirmation for the hypothesis that "elites have depended upon their investments to realize income growth, and that such windfalls were not shared with most other households" (p. 451). His Fig. 5 reports that by 2008, those with more than $2 million in financial investments accounted for over half of the income of the top 1%.

The work reviewed here refers to the financialisation era from circa 1980, though the evidence does not yet extend past the global financial crises. The dominant finding is that the financial sector itself tends to exhibit higher levels of inequality than other sectors, though it has to be noted that the number of countries covered is limited. The growth of the financial sector and the rising inequality within the financial sector have contributed markedly to the general rise in inequality. The financial sector is also seen to have higher earnings than the non-financial sector, with the earnings gap between financial and non-financial tending to widen. The evidence which has been brought forward here supports the view that the higher earnings in the financial sector reflect economic rents being gained by those in the financial sector rather than representing enhanced efficiency or productivity.

5 Financialisation and Income Distribution

In this section, there is a review of the research, which has examined the impacts of financialisation, viewed in a number of different dimensions, on income inequality and on the distribution of income between wages and profits. The research reviewed is econometric analysis, and it is only those dimensions of financialisation for which quantitative proxies are available which can be included. The quantitative proxies are in general rather simple measures such as ratio of bank deposits to GDP and

many of them have been outlined above. The nature and dimensions of financialisation have been a much discussed one as noted above, and it is a term which is used in different ways by different authors. At best, the simple measures included in the econometric exercises which are labelled financialisation (or similar) reflect one or two dimensions of financialisation, and are limited to those dimensions for which a proxy is available.

Evans (2014) considers the trends in inequality in four countries. He concludes that the worsening of the distribution of income in Germany primarily arose from the labour market reforms introduced by the Social Democratic-Green coalition government in the early 2000s. There were a range of financial liberalisation measures introduced in Germany with diverse effects. In the USA, he finds that extensive liberalisation in the 1980s and the 1990s was closely associated with a major increase in inequality, arising from a combination of high incomes paid in the financial sector and the pressures coming from financial institutions on non-financial corporations to reduce wage costs and employment. However, in Brazil, government policies from 2003 onwards raised the minimum wage and pensions, and through new credit programmes, lower income groups acquired greater access to housing and consumer durables. Although incomes in Brazil remain highly unequal, inequality has declined. In India, there was a marked rise in inequality as the financial liberalisation of the early 1990s led to a reduction of credit programmes, particularly in rural areas, designed to counter inequality. There was an acceleration of economic growth but with the benefits accruing almost exclusively to middle- and upper-income sectors.

Davis and Kim (2015) in their sociological review of papers on financialisation focus on the impacts of the pursuit of shareholder value on corporate strategies and on earnings of top managements, and on the ways in which financialisation shapes the patters of inequality in society. They conclude that "financialization has shaped patterns of inequality, culture and social change in the broader society" (p. 203).

In Flaherty (2015), the measure of inequality is the income share of the top 1 per cent. He seeks to examine the impact of financialisation on inequality using a panel analysis of 14 OECD countries over the

period 1990–2010. Market capitalisation, private sector credit (both as per cent of GDP) and the gross operating surplus of finance, insurance and real estate in gross operating surplus along with financial globalisation (external assets and liabilities as per cent of GDP) were the measures of financialisation used. The first and third of those variables are found to have a statistically significant effect in raising inequality. The extent of banking sector liberalisation, extent of banking sector supervision, and a financial reform index are used as measures of the regulatory environment. Flaherty (2015) finds that these measures are all associated with growth in the top income share. A range of control variables such as government consumption, union density, trade openness and economic globalisation were also included.

Zallewski and Whalen (2010) review the institutional routes through which financialisation can impact on inequality. They use an index of financial deepening, developed by IMF, which is based on three sub-indices that measure traditional banking activity, new financial intermediation and financial markets, as a measure of financialisation. Over the period 1995–2004, the financial index increased in 17 out of 18 industrial countries covered by an average of over 12%. They report a correlation coefficient across countries between the financial index and the Gini coefficient as a measure of income inequality of 0.184 in 1995 and 0.254 in 2004.

Tridico (2018) postulates that increases in inequality in OECD countries (which is measured in terms of personal distribution of income, using a range of measures including Gini coefficient, the Palma ratio) arise from radical changes in the main features of the socio-economic model in those countries. These changes involve a shift towards financialisation, which is measured in Tridico (2018) by market capitalisation of listed domestic companies as a percent of GDP which has a shortcoming of volatility reflecting the ups and downs of the stock market. Other institutional changes included in the study are pressures on labour through increased labour flexibility, the decline of trade union power and the reductions in social spending by government. The econometric results support the proposition that financialisation encouraged inequality.

Westcott and Murray (2017) focus on the ways in which the expansion of the financial sector and changes in financial institutions may impact on inequality. Increases in financial activities alongside rising asset prices suggest that financialisation made an important contribution to the increase of wealth for financial asset owners. Financial deepening and development of new types of financial institutions were seen as allowing those in possession of financial assets to increase their income and their wealth at a faster rate than those dependent on labour earnings.

Roberts and Kwon (2017) use a panel analysis of 17 OECD countries from 1980 to 2007. They find that growth in financial sectors and in financial sector employment is associated with higher income inequality, greater wage disparities and a greater concentration of income in the more affluent households. The size of those effects is found to be stronger in liberal market economy countries.

IILS (2008) focus on financial globalisation measured in their empirical work by the sum of foreign assets and liabilities, expressed as percent of GDP. It is argued that "the current dynamics of financial globalization have prevented a further convergence of wealth both across and within countries, with income inequality in low-income countries remaining unaffected by financial openness" (p. 44). It is found that financial globalisation depresses the share of wages in GDP even after allowing for the decline in wage share which can be attributed to trade openness (increasing elasticities of labour demand) and changes in labour market regulations and institutions. It is estimated that an increase in financial openness by 1 percentage point reduces the labour income share by 0.3 percentage points.

Darcillon (2015, p. 477) focuses on the impact of financialisation on workers' bargaining power and employment protection legislation in 16 OECD countries over the period 1970–2009. He argues that financialisation pushes labour markets in the decentralised bargaining direction and more flexible employment relations. Using panel data models, the results indicate "that financialization is clearly associated with a reduction in workers' bargaining power and in the strictness of employment protection" (p. 477). Financialisation is viewed in terms of a finance-led

regime of accumulation and of the pursuit of shareholder value though it is measured by share of value added in finance and share of employment of finance.

Hein et al. (2017) view financialisation as potentially affecting wage and profits shares through three channels of the sectoral composition of the economy, the financial overhead costs and profit claims of the rentiers and the bargaining power of workers. They examine indicators for each of these channels for six OECD economies before and after the global financial crisis. They conclude that the relationship between financialisation and income distribution differs between those countries which they identify as 'debt-led private demand boom' (the US, the UK and Spain in their sample), the 'export-led mercantilist' countries (Germany and Sweden in their sample) and the 'domestic demand-led' economy of France. In their sample, all countries except the UK, saw a decline in the wage share in the period from the early 1990s until the crisis. However, the forces behind the general decline in the wage share differed. In the 'debt-led private demand' group, the sectoral shifts towards the financial sector with its higher profit share and the declines in the bargaining power of trade unions and workers were seen as the key forces. In the case of the USA, higher financial overheads and rentiers' claims on profits were factors contributing to the lower wage share. In the 'export led mercantalist' group, the changes in the sectoral composition of the economy did not help to explain the falling wage share. There was a general, though not universal, significance of the deterioration of workers' and trade unions' bargaining power for the falling wage share. These differences between the country groups have largely carried through to the post-crisis period.

Stockhammer (2015b) investigates the relative impacts of financialisation, globalisation, welfare state retrenchment and technological change on the functional income distribution. A dataset covering 28 advanced and 43 developing and emerging economies over the period 1970–2007 is used. Financialisation is measured in terms of financial globalisation, which is the logarithm of external assets plus external liabilities (relative to GDP). An index of financial reforms is also included. Stockhammer (2015b) finds that "financialization has had the largest contribution to the decline of the wage share" (p. 27) with globalisation also having a substantial effect.

Denk and Cournède (2015) use data from OECD countries over the past three decades and show that financial expansion has fuelled greater income inequality. They find that higher levels of credit intermediation and of stock market capitalisation are both related to a more unequal distribution of income. They use numerical simulations to indicate that expansion of the financial sector restrains the income growth of low- and middle-income households. The authors use three measures of financial size, all measured relative to GDP, which are the value added of the financial sector, credit by banks and other financial institutions to the non-financial private sector and stock market capitalisation. They find that, in general, more finance has been associated with higher income inequality, though no relationship was detected for the value added of the financial sector (which was indicated above to be often not growing relative to GDP).

Lin and Tomaskovic-Devey (2013) use cross-section time series American data at the industry level. They find a long-run relationship, which indicates that a higher ratio of financial income to profits is associated with a reduced labour share of income, increase in top executives' share of employee compensations and increase in the dispersion of earnings. After allowing for the effects of decline in unionisation, the effects of globalisation, technical change and capital investment, they find the effects of financialisation on inequality to be substantial. "Our counterfactual analysis suggests that financialization could account for more than half of the decline in labor's share of income, 9.6% of the growth in officers' share of compensation, and 10.2% of the growth in earnings dispersion between 1970 and 2008" (Lin and Tomaskovic-Devey 2013, p. 1284).

Alvarez (2015) investigates the connections between the financialisation of French corporations and the functional distribution of income in the non-financial sector. Firm-level data of 6980 French non-financial firms over the period 2004–2013 are utilised. Financialisation is measured in terms of the increasing dependence of earnings through financial channels. Increased dependence on financial profits and technological change are found to the most important determinants of functional income distribution, and more important than trade openness or labour market institutions.

Dünhaupt (2017) explores the relationship between financialisation and labour income share for data set of 13 countries over the period 1986–2007. Globalisation (trade openness, foreign direct investment, and prices of raw materials and semi-finished products), worker power (unemployment rate, union density and strike intensity) and government activity are also included in the regression analysis. Financialisation is viewed in terms of shareholder value orientation, which itself is proxied in terms of net interest and net dividend payments of non-financial corporation relative to the capital stock of the business sector. It is found that net dividend payments have a negative effect on wage share in all specifications. The net interest payment variable is not significant in some specifications, but in the absence of the dividend payments variable, it has a negative sign. The combined shareholder value variables with both dividends and net interest payment show a significant and negative effect on the labour share.

Das and Mohapatra (2003) present evidence of a strong statistical association between the event of liberalisation and income shares. Specifically, they find a positive coefficient between financial liberalisation and the top quintile's share of mean income, a negative coefficient between liberalisation and the income share of the middle-income groups, but no evidence of statistical association between liberalisation and the lowest income quintile is found.

Panico and Pinto (2018) and Panico et al. (2012) draw on Sraffian ideas to conduct a theoretical analysis of the links between income distribution and the size of the financial industry. They argue that the changes in financial regulations have permitted the sales of the financial sector to increase faster than the rest of the economy. The input and output compositions and income distribution vary. They conclude that "these changes have interacted with those originated by the alteration in the relations among managers, shareholders and workers and by the slow growth of the economy, generating further changes in the power relations among social groups, in the productive structure and in income distribution" (Panico and Pinto 2018, p. 56).

The studies, which have been reviewed in this section, have drawn on different dimensions of financialisation, and have used relatively simple proxies for the dimensions selected. The general conclusion from these contributions has been that financialisation, along with a range of

other factors, such as trade union and collective bargaining power, does impact on the distribution of income, particularly the shares of income between labour and capital. The findings are in line with the expectations of the financialisation literature that financialisation raises the profits share and diminishes the labour share of income.

6 Stratification in the Financial Sector

Arestis et al. (2014) argue that the income distribution effects associated with financialisation, along the lines discussed in the previous section, have also gone alongside an occupational stratification process that has raised income of the managerial and financial occupations at the top of the income scale whilst leaving service occupations at the bottom of the US society. "The role of race norms seems to have been particularly strengthened by financialisation in the high-status managerial and financial occupations" (p. 1488). Further, the stratification of the USA labour market has been exacerbated by financialisation operating through the effect on social norms. In an earlier paper (Arestis et al. 2013), these authors had explored whether financialisation in the USA had created identity preference effects by linking managerial and financial occupations to high earnings, and in turn the high earnings of white men as the dominant demographic group in the work force. Their empirical results covering the period 1983–2009 confirmed that not only was there wage premium for those working in managerial and financial occupations, as the literature surveyed above had shown, but also that the wage premium received by financial occupations is not equally distributed among all gender and ethnic groups. Within each ethnic group, men took an increasing share of the finance wage premium at the expense of women.

7 Financial Deepening and Inequality

This section considers the effects of the expansion of financial institutions and their operations on inequality and poverty. Financial deepening is often used to describe the growth of the banking system and measured in simple terms by, e.g., ratio of bank deposits to GDP.

The growth of the banking system has implications for financial inclusion/exclusion. Financial development and deepening can take many forms and working through a variety of institutional arrangements, the relationships will vary over time and space. It is easy to point to features of the financial system and institutions, which are intended to aid the poor—micro-finance institutions, credit unions being notable examples. The literature does not yield any general conclusion on the effects of financial deepening on inequality, as much depends on the nature of the financial deepening, which financial institutions grow and the prevailing levels of financial deepening.

Demirguc-Kunt and Levine (2009) discuss the range of theories relating financial deepening and the evolution of inequality and poverty. They outline the various routes through which financial deepening can impact on inequality. They further argue that the theory on this matter is not unambiguous, and that while the theoretical analysis provides indications of a range of possible mechanisms linking inequality with the operation of the financial system, "many of the core questions about the nature of the relationship between inequality and finance are empirical" (p. 45). Although they find that the accumulating body of empirical evidence is far from conclusive, they do argue that the findings of "cross-country, firm-level, and industry-level studies, policy experiments, as well as general equilibrium model estimations all suggest that there is a strong beneficial effect of financial development on the poor and that poor households and smaller firms benefit more from this development compared with rich individuals and larger firms" (p. 46).

Kim and Lin (2011) argue that most theoretical studies point in the direction that financial deepening and development can be an instrument for improving the distribution of income. They conclude that whether or not that is the case depends on the stages of financial development in a country, with the benefits of financial deepening only occurring beyond a threshold level of financial development. Financial development tends to raise inequality below a critical value of financial development. Their policy implication is that a minimum level of financial development is needed in order for financial development to help reduce income inequality.

Beck et al. (2007) found that financial deepening helped the poor with the incomes of the poor growing faster than average per capita income. Their results indicate that around three-fifths of the effects of financial development on the poorest quintile come through aggregate growth and two-fifths through reduction in income inequality.

Greenwood and Jovanovic (1990) developed a theoretical model in which links between economic growth, financial development and the distribution of income were explored. In their model, which they viewed as consistent with casual observation, as income levels rise, the financial system becomes larger and economic growth becomes more rapid, and income inequality also rises. At a mature stage of development, with what they term a full developed financial structure a stable income distribution is found alongside a higher growth rate than initially.

Nikoloski (2013) uses a dynamic multivariate panel data analysis on 161 developed and developing countries over the period 1962–2006. Financial deepening is measured by the ratio of credit to the private sector by financial intermediaries to GDP and inequality is measured by the Gini coefficient. In the regression analysis of the relationship between inequality and the measure of financial deepening, a range of control variables are included, amongst them GDP per capita and its square, inflation rate, institutional development and government spending as per cent of GDP. Nikoloski (op. cit.) reports empirical evidence for an inverted U-shaped relationship between financial sector development and income inequality, and hence financial development is associated with higher inequality at lower levels of financial development, and with lower inequality at higher levels.

Jauch and Watzka (2016) investigate the link between financial development (measured by the ratio of credit to GDP) and inequality (measured by the Gini coefficient) using an unbalanced data set of up to 148 developed and developing countries over the period 1960–2008. Within countries, they find that financial development increases income inequality. They also report that more developed financial markets lead to higher income inequality. Control variables used include GDP per capita and its square, inflation rate, government expenditure and size

of agricultural sector. A range of robustness checks are included. They conclude that there is the positive relationship between inequality and financial development which is highly significant but relatively small. With the Gini coefficient measured on a scale of 0–100, they report that an increase in the provision of credit by 10% would lead to an average increase in the Gini coefficient of 0.22.

As the literature has suggested, there are numerous routes through which financial developments and the growth of the financial sector can have influences on inequality. In econometric studies, financial deepening is typically measured by simple proxies which cannot reflect the complexities of the relationships between financial institutions and the public and the different forms of financial institutions. The empirical work, which has been reviewed here, presents a mixed picture of the relationships between financial deepening and inequality with some positive and some negative linkages.

8 Inequality and Financial Crisis

The sharp rise in inequality in the USA in the decade prior to the American sub-prime crisis has often been viewed as at least a contributory factor to the generation of that crisis. However, a banking and financial crisis also occurred in the UK where inequality had in general not risen in the previous decade except with regard to the share of the top 1%. Financial crises have generally been preceded by some combination of rapid credit expansion and rising asset prices. Credit expansion and rising asset prices both foster expansion of aggregate demand and of output and employment. Both are inherently unsustainable. The links of inequality with financial crisis would then run through credit expansion and rising asset prices. This section delves into the linkages between inequality, particularly rising inequality, and the occurrence of financial crisis. A route often suggested is that rising inequality pushes people who have lost out from rising inequality towards debt to maintain consumption levels, and the burst of debt accumulation proves unsustainable. This leads to an examination of inequality and household debt.

The general set of arguments has been summarised in Stockhammer (2015a) where he postulates four channels through which rising inequality contributed to the financial crisis of 2007/2009 with the crisis to be viewed as the interaction of the deregulation of the financial sector (a component of financialisation) with the effects of rising inequality.

The first of the channels identified is the demand depressing effects of rising inequality as income shifts from poorer income groups with high propensity to spend to richer income groups with lower propensity to spend. This, as a number of authors have argued, may well have slowed economic recovery. For the third channel, Stockhammer draws on the debt-led vs. export-led models, to suggest a channel in debt-led economies where "higher inequality has led to higher household debt as working-class families have tried to keep up with social consumption norms despite stagnating or falling real wages" (p. 936). This appears to particularly apply to the USA (often identified as a debt-led economy), whereas the UK which is also generally identified as debt-led experienced a credit boom with rising debt and house prices in the decade prior to the global financial crisis, but real wages had generally been rising (at least until 2005), and the sharp rise in inequality having occurred in the 1980s and flattened off since then. A further channel comes from "rising inequality [increasing] the propensity to speculate as richer households tend to hold riskier assets than other groups. The rise of hedge funds and subprime derivative in particular has been linked to rise of the super-rich" (p. 936). This appears to suggest that the overall degree of risk rises as the rich move into riskier assets, but no mechanisms are proposed by which overall risk would rise. However, we can point to the ways in which securitisation in effect raised risk.

The remaining channel (numbered two) is seen as financial liberalisation of the capital accounts allowed large current account imbalances.

In the context of the American financial sub-prime crisis of 2007/2009, many have argued for the role of rising inequality in the generation of the crisis. Rajan (2010) argued that the political response to rising inequality in the United States had been the expansion of lending to households, particularly low-income ones. The political response may have been planned or an unpremeditated reaction to constituent demands. There was the stimulating effect through aggregate

demand, but with an unsustainable credit boom. Van Treeck and Sturn (2012) summarise the argument in terms of rising incomes in recent decades in the USA being confined to a relatively small group of households at the top of the income distribution. Increasing consumer expenditure of the lower and middle-income groups became mainly financed through rising debt rather than rising incomes. This was aided by government actions of deregulation of the financial sector which facilitated increased lending to households and through credit promotion policies. The debt-financed consumer-led demand expansion came to an end as the downturn in the US housing market, the sub-prime mortgage crisis took their toll and highlighted the over-indebtedness of American households. They conclude with specific reference to the USA that the changes in the functional distribution of income between wages and profits did not play an important part in explaining the increase in the consumer expenditure to output ratio and the decline in the savings ratio. However, they find substantial evidence that rising income inequality between households did make an important contribution to rising personal debt, falling household saving rate. Lower and middle-income households sought to keep up with the higher consumption levels of top-income households facilitated by readily available credit.

Van Treeck (2014) asks whether inequality caused the USA financial crisis (of August 2007). He concludes that "there is substantial evidence that the rising inter-household inequality in the United States has importantly contributed to the fall in the personal saving rate and the rise in personal debt (and a higher labour supply)" (p. 421). This may be seen as a 'demand-side' argument which van Treeck (op. cit.) relates to a 'relative income hypothesis' under which households seek to maintain consumption levels when their relative income declines through borrowing. In order for that to take place, there has to be a willingness of banks and financial institutions to lend.

Iacoviello (2008) approaches the issue through the construction of a theoretical model, which can mimic the time series behaviour of the distribution of earnings in the USA over the period 1963–2003. He claims to show that the model can replicate the trend and cyclical behaviour of household debt and the diverging patterns in consumption and wealth

inequality over time. He argues that the prolonged rise in household debt during the 1980s and 1990s can be quantitatively explained only by the concurrent increase in income inequality.

Goda and Lysandrou (2014) focus on the toxic securities of collateral debt obligations (CDOs), which were central to the financial crises of 2007–2009. As discussed above, income inequality and stagnant incomes of most workers in the USA have been viewed as factors leading to rising household debt and sub-prime mortgages and then the financial crisis. They argue that low incomes can help explain the demand for mortgage loans; but it remains to be explained why financial institutions were prepared and able to meet the demand and why the mortgage loans were securitised and resecuritised into CDOs. They argue that wealth concentration amongst the world's richest individuals was a 'demand-pull factor' with a 'search for yield' as yields on bonds declined and CDOs appeared to offer high returns.

Considering the more general case of the links between inequality and financial crisis, drawing on 25 countries over 100 years, Atkinson and Morelli (2011) find 'no hard and fast pattern' as to whether or economic crises (in their Table A.1 the term systemic banking shocks is used) are preceded by rising inequality. They find 'more evidence that financial crises are followed by rising inequality'. Morelli and Atkinson (2015) extend the previous study by adding further data and investigating both the hypothesis that growth of inequality contributes to financial crisis and that the level of inequality does so. They find that the empirical evidence does not provide any convincing support for either of the hypotheses.

Bellettini and Delbono (2013) find that a large majority of banking crises in the last three decades took place in countries where income inequality before the crisis had been persistently higher than the average level in OECD countries. However, the banking crises did not appear to change the relative position of income inequality of the countries experiencing crisis as compared with average OECD levels. They finally conclude that "only in the 2000s relatively low income inequality seems associated to the lack of banking crises, whereas in the previous decades we do not detect any clear association" (Bellettini and Delbono, op. cit., p. 12).

UNCTAD (2017, p. 101) recognises that financial crises have multiple causes and rising inequality may not always be one of the causes, particularly in smaller countries which are vulnerable to changes in external conditions. In their Fig. 5.5, UNCTAD (2017) correlate changes in private debt and changes in inequality in developed countries and developing countries prior to financial crisis (using the Laeven and Valencia 2012, data on crises). This shows a generally positive correlation between debt and inequality prior to financial crisis. However, as they argue, the financial institutions and regulation have to provide the credit in the creation of credit bubbles leading to financial crisis. There is a general increase in the Palma ratio, with the income gap rising in 80% of cases in run-up to financial crisis, and also rising in 66% of cases after a financial crisis (UNCTAD 2017, p. 101).

Van Treeck and Sturn (2012) followed their study of the USA mentioned above by considering the cases of China and Germany. For China, they note that there is limited access to personal credit. A high level of savings by households is seen as stimulated by high income dispersion and a weak social safety net, and to that degree income inequality may push towards high savings rather than debt. Higher income inequality is viewed as contributing to higher intensity of status seeking, which appears to result in a higher personal propensity to save as households are precluded from the easy use of credit to support conspicuous consumption.

The authors note that domestic demand in Germany stopped growing in the first decade of the twenty-first century, and growth became heavily dependent on rising net exports. The stagnation of German unit nominal labour costs in the fixed exchange rate regime of the euro zone stimulated German exports. Further, the shift towards increased profit margins and lower labour income share weakened consumer expenditure. Rising income inequality and uncertainty of private households, which can be attributed in part to labour market and welfare state reforms, contributed to higher savings rather than to consumer borrowing.

Cardaci and Saraceno (2015) seek to analyse the impact of rising income inequality on the possibilities of a crisis in different institutional setting employing a macroeconomic model, and using agent-based

modelling in a stock-flow consistent framework. They find that when inequality rises, low credit availability would mean a drop in aggregate demand, whereas relaxed credit constraints result in greater financial instability.

Bordo and Meissner (2012) use data from 14 advanced countries between 1920 and 2000 and their results do not indicate any general relationships between inequality and crisis. They note that the role of credit booms in increasing the risks of a banking crisis, but they did not find any evidence that a rise in the shares of the top income groups led to credit booms.

Michell (2015) views rising inequality and falling wage share as driven by globalisation, deregulation and financialisation, with a common theme being the weakening of the bargaining power of workers. He notes that there are two different and mutually reinforcing mechanisms for maintaining growth rates in the face of falling demand in response to a declining wage share, namely credit expansion to a household sector faced with stagnant or falling real income, and an increasing reliance on exports. The credit expansion will likely prove to be unsustainable and may lead into at least a slow-down in economic activity if not into a banking crisis. He argues that for the 2007/2009 financial crises, the proximate trigger was the non-performing mortgage debt, and the mortgage-backed securities collapse and the resulting contagion effects on those financial institutions which held the now toxic assets.

The effects on inequality on household debt have been examined by a number of authors. Klein (2015) investigates long-run relationships between income inequality and household debt in nine industrialised countries (Australia, Canada, France, UK, Italy, Japan, Norway, Sweden and United States). Two measures of household debt (private household credit and total bank loans) and four measures of inequality such as top 1% income share, inverted Pareto-Lorenz coefficient, the Gini coefficient and labour share of income are used. The results were robust across the four inequality measures, and it is reasonable to conclude that in developed economies there is a long-run relationship between income inequality and leverage. A 1% point increase in inequality is found to be associated with a 2–6% increase in household credit (varying across measures of inequality used).

Malinen (2016) finds a long-run steady-state relationship between income inequality and bank credit for a sample of eight countries (those in Klein's study less Italy), and for the period 1980–2009. Income inequality is found to have one-way Granger causality relationship with bank credit.

With particular reference to the US, Barba and Pivetti (2009) argue that rising household indebtedness should be seen mainly as a response to stagnating real wages and the cut back of the welfare state. As others have raised, they raise concerns over the sustainability of rising indebtedness, where debt has a stimulating effect in the short term, which cannot be sustained in the longer term.

Kim (2013) examines the relationship between output and household debt in the USA over the period 1951–2009 with a structural change in the fourth quarter of 1982 to allow for financial liberalisation measures at that time. He finds that in the pre-1982 period, household debt levels had no significant effects on output, though new borrowing did boost output. In the post-1982 period, household debt levels had negative effects on output while new borrowing continued to boost output. In a related study, Kim (2016) remarks that an additional economic stimulus comes in the short term from debt-financed household spending, but after a while, the accumulation of debt becomes excessive and unsustainable. The resulting crisis generates negative impacts on output in the long run. A system operating with high and often rising levels of household debt can become vulnerable to negative shocks, and the possibility of a severe economic down-turn.

The general conclusion which is to be drawn from the material reviewed above is that, under certain conditions, a rise in inequality may contribute to the generation of financial crisis. The key condition would be that the rise in inequality fosters an unsustainable rise in household debt, which, when the bubble of debt bursts, feeds into a financial crisis. That key condition clearly requires that people respond to declining income shares by borrowing to maintain consumption levels and that banks and other financial institutions are keen to extend loans. The situation in the USA in the early 2000s supported key condition being met. In other situations, that key condition has not held and inequality and financial crisis have not been correlated. As Bazillier

and Hericourt (2017) conclude, "the links between inequalities and leverage are likely to be a mixture of direct and indirect causal relations, as well as coincidental factors" (p. 489). They also argue that "the effects of financial development and financial deregulation on income distribution are not necessarily identical and are conditioned strongly on the quality of institutions preventing rent-capturing behaviours" (p. 489).

9 Concluding Comments

The general conclusions which are drawn from this chapter in respect of financialisation and inequality in Western industrialised economies are four-fold. First, in a general sense, higher levels of inequality and declining labour share of income have accompanied financialisation in the present era from late 1970s onwards. Second, the financial sector itself tends to display high levels of inequality of earnings and income, and inequality in the financial sector has directly had an impact on overall inequality particularly in respect of the share of the top 1%. Third, there is evidence to support the view that financialisation has aided a shift in income distribution from wages to profits, but the difficulties of measuring financialisation in econometric exercises have been noted. Fourth, rising inequality looks to have been a contributory factor in the generation of the USA sub-prime crisis though other factors such as de-regulation, banks and financial institutions increased willingness to provide credit have to be involved. However, doubts have been raised as to whether that finding is of general application to financial crises in general.

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