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FINANCIALISATION AT A WATERSHED IN THE USA¹

Costas Lapavitsas

Department of Economics, SOAS
University of London. Office 269,
Thornhaugh Street, Russell Square,
London WC1H 0XG, UK. Email:
cl5@soas.ac.uk

Ivan Mendieta-Muñoz

Department of Economics,
University of Utah. Office 213,
Building 73, 332 South 1400 East,
Salt Lake City, Utah 84112, USA.
Email:
ivan.mendietamunoz@utah.edu

Abstract

In the period following the Great Recession of 2007-9 the financialisation of the US economy reached a watershed characterised by stagnant financial profits, falling proportions of financial sector and mortgage debt, and rising proportion of public debt. The main macroeconomic indicators of financialisation in the USA show structural breaks that can be dated around the period of the Great Recession. The reliance of households on the formal financial system appears to have weakened for the first time since the early 1980s. The financial sector has lacked the dynamism of the previous three decades becoming more reliant on government. The state has increased its own indebtedness and supported large financial institutions via unconventional monetary policy measures. At the same time, state intervention has tightened the regulatory framework for big banks. The future path of financialisation in the USA will depend heavily on government policy with regard to state debt and financial regulation, although the scope for boosting financialisation is narrow.

Keywords: Financialisation, financial profits, debt, household debt, U.S. economy.

1. Introduction

The financial sector in the USA has tended to expand in the post-war era, despite numerous economic crises. The march of finance seemed relentless during the last four decades, giving rise to the concept of financialisation. The implications of this development for the economy and for wage workers have been pronounced in terms of value extraction, indebtedness and the unprecedented penetration of finance into personal and household life.

However, the period following the Great Recession of 2007-9 has been distinctly different in the USA. For one thing, economic growth has been weak. For another, the financial sector has recovered from the shock of the crisis, but its performance in terms of trading, lending and profits has also been weak compared to other periods of recovery in the last four decades. Furthermore, the exposure of households to formal finance has not advanced with nearly similar vigour.

Three aspects of the economic performance of the USA stand out in this regard. First, financial profits, as shown by several indicators, have not resumed their upward trend since the crisis. US banks have operated in an environment of sustained pressures on profitability during the last decade. Second, the volume of mortgage debt relative to disposable personal income has declined substantially for the first time since the 1980s, a development with potentially significant implications for the financial system. Third, the US government has

provided support to financial institutions by lowering nominal interest rates in the vicinity of zero and implementing unconventional policy measures, while supplying abundant liquidity to banks. The outcome has been a substantial expansion of state indebtedness which has roughly cancelled out the decline in household indebtedness. At the same time, the US state has constrained the activities of financial institutions through new regulations.

Taken together, these developments point to a halt in the march of financialisation in the USA. On the evidence available so far, financialisation has reached a watershed and its future path will depend on government policies. It is conceivable that, if financial deregulation received a new boost, a fresh acceleration of financialisation could occur, in view especially of the expansion of state debt since 2007-9. However, a very different possibility is also open. The US economy is likely to remain financialised, and the ability of the financial system to generate bubbles and financial crises will continue to mark its performance, but the high point of financialisation might be behind us.

The rest of this paper comprises four sections. Section 2 reviews relevant bodies of work that emphasise different aspects of financialised capitalism. Section 3 examines the watershed in the financialisation of the US economy after the great crisis of 2007-9 at the macroeconomic level by presenting data on the evolution of financial profits, indebtedness and the composition of aggregate debt. We corroborate the presence of statistically significant structural changes around the period of the Great Recession in the main indicators and discuss the results obtained. In light of this evidence, Section 4 explores some relevant theoretical issues with regard to the

relationship between households and finance, followed by conclusions in Section 5.

2. Main approaches to financialisation

Financialisation in the USA emerged in a fairly modest way at the end of the 1970s as the financial sector began to grow relative to the rest of the economy. Since the early 1980s the balance between the financial sector and the rest of the economy has shifted strongly in favour of the former, and with considerable vigour in the 1990s and 2000s. This is the context in which the concept of financialisation has emerged in social sciences.

The literature on financialisation is large and continually expanding. Using van der Zwan's (2014) literature survey it is possible to identify three bodies of work that emphasise, respectively, the emergence of a new period of accumulation, the ascendancy of shareholder value, and the financialisation of everyday life. Although informed by different theories of capitalism, these approaches share a common concern for financialisation as a structural transformation of contemporary capitalism.

The accumulation approach has been developed by a broad group of scholars –French Regulationists, Marxist and Post-Keynesian economists, economic sociologists and critical international political economists– who have emphasised the systemic aspects of financialisation as a distinct historical phase in the development of capitalism. Krippner (2005, p. 174) pointed out that financialisation represents “a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and

commodity production”. The study of financial profits also played a fundamental role in the Marxist approach developed by Lapavitsas (2009, 2011, 2013), who argued that the extraction of profits in financial markets and from households includes a “direct” component in a financialised economy in contrast to the “indirect” extraction of surplus value in production. This feature of profit extraction has been termed “financial expropriation” and is explained in more detail at the end of this section.²

Important in this respect is the “dual movement” of non-financial corporations that have increasingly derived profits from financial activities while at the same time augmenting their payments to the financial sector as interest, dividends, and share-buy-outs (Crotty, 2005). This “dual movement” has created a constraint for non-financial corporations by limiting capital available for productive investment despite the increase in profits from financial activities. Financialisation has thus contributed to a slowdown of accumulation since investment in tangible assets has suffered. It is important to note, however, that empirical evidence at the firm-level suggests that there have been variations according to firm size (Orhangazi, 2008). The interplay between “real” and “financial” processes with regard to investment is, thus, complex and contradictory (Orhangazi, 2011; Lapavitsas, 2013).

In this regard, some scholars have emphasised the role of “the rentier” at the centre of an inherently unstable financial system (Epstein and Jayadev, 2005). The rising profits of the owners of loanable capital and of financial institutions have been the counterpart to weak investment, stagnant real wages and increased indebtedness by households. The presence of the rentier

combined with high debt levels and low economic growth has increased the instability of the economy.³

The literature on financialisation as a period of accumulation has also emphasised the importance of government policies toward finance. Thus, Krippner (2012) and Lapavitsas (2013) argue that the US state has buttressed the ascendancy of finance through a sustained policy of financial deregulation, the first intimations of which could be observed already in the second half of the 1960s. The US state has also been pivotal in dealing with the successive crises that have emerged in the course of financialisation, above all, with the great crisis of 2007-9. The ability of the state to intervene in the sphere of finance has depended crucially on its monopoly control over the final means of payment.

Further light on financialisation has been cast by the literature on the rise of shareholder value as characteristic feature of the modern corporation, especially in the USA. Shareholder value has become, first, a practical norm that provides justification for practices favouring shareholders over other constituents of the enterprise and, second, an ideological construct that legitimates a far-reaching redistribution of wealth and power among shareholders, managers and workers, at the expense of workers.

The seminal paper by Lazonick and O'Sullivan (2000) pointed out that financialisation has fostered widespread belief in the economic benefits of maximising shareholder value as the principle of corporate governance. The implications for the internal structure of corporations have been drastic, as shown in further detail by recent economic sociology. Thompson (2003; 2013) has emphasised that financialisation has worsened the condition of labour at

work, as employers have not kept their side of the employment bargain. The ideology of shareholder value was stressed by Clark (2009) in explaining the further destabilisation of labour relations through exposure to capital markets. Daguerre (2014) has noted that financialisation has weakened labour by making employment more insecure, so that the end of the full-employment compact is a consequence of the rise of financialisation. More recently, Cushen and Thompson (2016) have returned to the ideology of shareholder value and have explicitly considered the intensification of value extraction from labour as corporations have become financialised.

Finally, the literature on the financialisation of the everyday life has emphasised the diverse ways in which finance has spread across society through a range of projects and schemes aimed at incorporating low-income and middle-class households in financial markets –the “popular finance” described by Aitken (2007). This process has several complex aspects, including increased household participation in pension plans (Waine, 2006), the spread of consumer credit (Montgomerie, 2006) and the rise of home mortgages (Langley, 2008; Aalbers, 2008, 2015; Fernandez and Aalbers, 2016). By participating in financial markets, households and wage-earners have been encouraged to internalise new norms of risk-taking, increasingly shifting toward financial markets for the provision of basic needs.

The analysis in this paper draws on the Marxist approach developed by Lapavitsas (2013), which treats financialisation as a distinctive period in the development of capitalism lasting broadly four decades and characterised by the following three tendencies. First, large non-financial (productive) enterprises have less need to borrow from financial intermediaries since they

command substantial amounts of liquid money capital, which they often deploy in financial transactions. This means that financialisation has been marked by the relative detachment of industrial capitalists from banks. Second, financial intermediaries are less engaged in supporting investment by non-financial enterprises, turning instead toward trading in financial markets and transacting directly with households. Thus, financialisation is also marked by the turn of banks toward profiting from transactions in financial markets rather than lending to productive enterprises. Finally, households and individual workers have been drawn heavily into the formal financial system both to borrow and to place available saving. Therefore, the increasing implication of wage-workers and other social strata in the operations of the financial system to provide further opportunities for profit extraction is another defining feature of financialisation.

In this light, the trajectory of financialisation in the USA since the outbreak of the Great Recession is examined in this paper by focusing on a few specific economic magnitudes. First, and of paramount importance is financial profit, since its extraction and accumulation effectively sums up the conduct of capitalists (industrial and finance-focused) that drive financialisation. The tremendous growth of financial profit has marked the ascendancy of financialisation. By this token, the broad direction of financialisation in the USA since the Great Recession can be usefully surmised from the trajectory of financial profit.

Equally important are the fluctuations of aggregate debt in its various forms. Financialisation amounts to the expansion of the financial sector relative to the productive sector, typically resulting in greater debt creation. The financialisation of capitalism has been undoubtedly marked by the growth of

aggregate debt as well as by a shifting balance in its composition. On these grounds, insight into the direction of development of financialisation in the USA since the Great Recession could be gained by considering the overall trajectory and the changing composition of aggregate debt.

Finally, financialisation as a historical period has occurred within a social and political framework of laws, rules and policies by the state, and therefore its content can be expected to vary from country to country. In examining its trajectory, it is vital to take the social and political framework into account, while being aware that there could be little generalisation in this respect. For our purposes, the point is to outline the broad confines of state policy toward finance, thus casting further light on the development of financialisation in the USA since the Great Recession.

3. Financialisation in the USA since the Great Recession

The crisis of 2007-9 can be considered as the culmination of tendencies characteristic of the period of financialisation (Lapavitsas, 2013). The crisis originally broke out in the US financial system following a huge real estate bubble in the 2000s; the immediate trigger was the inability of the poorest layers of the US working class to meet mortgage debt obligations accumulated during the bubble; it spread to other financial systems as the international money market froze for lack of liquidity; and it became a global recession as trade and investment were affected by the collapse of credit. The crisis was subsequently dealt with through large-scale intervention by the US state, mainly by providing liquidity to banks through the Federal Reserve that has monopoly control over

the final means of payment, but also through the injection of capital in banks out of tax income.

To assess the evolution of financialisation in the USA since the crisis we present indicators from two fields. These are, first, the profits (or income share) of the financial sector and its main determinants; and, second, the accumulated debt of households, the financial sector and the non-financial corporate sector.⁴ The empirical analysis focuses on testing for the presence of structural changes in the main indicators that can be dated approximately around the period of the Great Recession. To that effect we deployed the algorithm for simultaneous estimation of multiple breakpoints occurring at unknown dates developed by Bai and Perron (1998; 2003) and calculated the corresponding confidence intervals associated with the breakpoints following Zeileis and Kleiber (2005).

The procedures were implemented using a univariate regression model for each series, including a constant (a_0) and a linear deterministic trend (t): $y_t = a_0 + a_1(t) + u_t$, where y_t is the series under consideration, a_1 is the coefficient on the linear trend, and u_t is the error term.⁵ In all cases we tested for structural breaks both in the mean and trend of the series and accounted for potential serial correlation via non-parametric adjustments.⁶ We also allowed up to five breaks, used a trimming percentage of 15%, and made provision for error distribution heterogeneity across breaks.

The main results are presented in Table 1 below. All the selected indicators of financialisation present structural breaks around 2007-9 when the confidence intervals at the 95% confidence level are considered, the only exception being the two series that depict non-interest income (both shown in

Figure 3). We interpret the presence of structural breaks estimated around the period of the Great Recession in the mean and trend of the series as evidence of a relative halt of financialisation: the period before the Great Recession was characterised mainly by rising financial profits, rising debt of the financial sector, and rising household and mortgage debt; in contrast, the period since the Great Recession has been characterised by stagnant financial profits, falling debt of the financial sector, and falling household and mortgage debt.⁷

3.1. Stagnant financial profits

Figure 1 presents the trajectory of financial profits, that is, the profits of financial institutions relative to GDP, for the entire period after the Second World War.⁸

[INSERT FIGURE 1 ABOUT HERE]

Financial profits in the US economy declined in the late 1970s and early 1980s, the time of the “Volcker Shock”, which led to turmoil in the financial system.⁹ After 2006 financial profits declined sharply, until collapsing in the course of the crisis 2007-9. In 2009 financial profits bounced back but have never attained the rising trend relative to GDP characteristic of the two decades following the Volcker Shock. As shown in Table 1, there is a statistically significant structural break in the financial profits series around 2004Q3–2017Q1.¹⁰

[INSERT TABLE 1 ABOUT HERE]

To explain the historic trajectory of financial profits, two fundamental variables have been identified on the basis of previous work by Lapavitsas and Mendieta-Muñoz (2017). First is the Net Interest Margin (NIM), i.e., the difference between interest received and interest paid out by banks relative to their total interest-earning assets. Second is the non-interest income (NII), i.e., income deriving mostly from fees, commissions and proprietary trading. The empirical analysis shows that the former is the most important explanatory factor with regard to aggregate financial profits.

Figure 2 shows the NIM for all US banks. It is notable that the NIM has been in steady decline since the early 1990s, reaching very low levels as the crisis of 2007-9 broke out. It bounced back strongly toward the end of the crisis as the borrowing rates of US banks were sharply reduced following government intervention, but has subsequently resumed its steady decline. As shown in Table 1, the NIM series presents a structural break around 2007Q3–2009Q4. In an environment of extremely low interest rates that has lasted for several years after the crisis, US banks appear to have faced difficulties in increasing the interest rate differential on their assets and liabilities to boost their profitability. The fall in NIM has affected negatively bank profitability.

[INSERT FIGURE 2 ABOUT HERE]

US banks have also faced difficulties in generating profits from NII since the Great Recession. These forms of bank income have been important to financialisation, reflecting the deep transformation of banks during the last four decades. Note that the NIM has been declining since 1994; however, financial profits were very high until 2007. This reflects the importance of NII during this period. Nevertheless, as shown in Figure 3, in the conditions that have emerged since the Great Recession, the NII of US commercial banks has declined both as a percentage of total bank assets and as percentage of non-financial corporate profits.¹¹

[INSERT FIGURE 3 ABOUT HERE]

The turn of the mortgage market in 2007 also seems to have signalled the end of a period of sustained increases in NII for US banks. To be more precise, in the years preceding the Great Recession, the ability of banks to extract non-interest profits was closely linked to the real estate bubble and to securitising and trading mortgage debt. In the aftermath of the Great Recession US banks have found it difficult to restore NII to a rising path. The structural break tests for the NII series shown in Figure 1, however, detect the breakpoints before 2007, indicating that the downward trend of the NII component started before the Great Recession.

The difficulties that US financial institutions have faced with regard to profits since the Great Recession are also apparent in two alternative measures of financial profitability, i.e., the return on assets (ROA) and the return on equity

(ROE), both presented in Figure 4 below. Data availability does not allow for accurate calculation prior to the 1980s. Nonetheless, it is clear that from the early 1990s to the mid-2000s the profitability of financial institutions was exceptionally high. The crisis brought a collapse of profitability, which bounced back in the early 2010s, but has never attained the previous levels. The era of exceptional financial profits characteristic of the 1990s and 2000s came to an end after the Great Recession, which is corroborated by the statistically significant breakpoints presented in Table 1 detected for both the ROA and ROE around 2009Q3–2010Q2.

[INSERT FIGURE 4 ABOUT HERE]

In sum, the rising trajectory of financial profits in the US economy appears to have come to a halt after the Great Recession. In the course of the four decades prior to the crisis of 2007-9 financial profits escalated as banks took advantage of the margin between interest received and interest paid, while also drawing fees, commissions and proprietary profits from transacting in financial markets and from dealing with households. The inability of financial profits to resume a rising trend since the Great Recession of 2007-9 is a sign that financialisation has reached a watershed in the US economy.

3.2. Aggregate debt and its changing composition

Turning to indebtedness, Figure 5 shows the proportion of debt relative to GDP for the non-financial and the financial sectors of the US economy since 1955. The period of financialisation has witnessed rapid growth of all debt but particularly that of the financial sector, i.e., debt created by financial institutions as they transact with each other and as they borrow and lend to the non-financial sector. It is clear that financial debt has declined substantially post-2009, while the debt of the non-financial sector has remained broadly stable. Indeed, as shown in Table 1, it is possible to detect breakpoints in both series around 2007Q1–2007Q4. The contraction of aggregate financial debt is consistent with banks having fewer opportunities to generate non-interest profits out of financial transactions. In part it is also probably related to the regulatory measures taken after the crisis to restrict the ability of large banks to engage in proprietary trading of financial assets (briefly discussed below). It is *prima facie* evidence of a relative halt of financialisation in the USA.

[INSERT FIGURE 5 ABOUT HERE]

Even more important, however, is the dramatic change in the composition of non-financial debt. Figure 6 splits non-financial debt into its main components: household, non-financial business and government debt.

It is immediately apparent that household debt has declined significantly as a proportion of GDP for the first time since the early 1980s.¹² Rising household debt has been an important source of financial profits in the decades of the ascendancy of financialisation. Its decline for the first time –as shown

below, associated almost exclusively with a fall in mortgage debt– indicates that the penetration of finance into household life in the USA has been attenuated after the Great Recession. As shown in Table 1, the presence of a structural break around 2007Q2–2007Q4 for the household debt series can be corroborated statistically.

[INSERT FIGURE 6 ABOUT HERE]

At the same time, the debt of the US non-financial business sector, i.e., of the core agents of capitalist accumulation, fell after the crisis and, although it has recovered in the ensuing period, it has not registered a significant increase. Its trajectory indicates that productive US enterprises have been relatively detached from the financial system since the Great Recession. Again, the presence of a breakpoint in this series can be detected statistically around 2004Q1–2008Q1 using the endogenous structural break tests presented in Table 1.

During the same period, government debt has risen substantially, thus entirely counterbalancing the fall in household debt. From Table 1 it is possible to observe that a statistically significant structural break occurred in the government debt series around 2005Q1–2007Q3. Rising US government debt since 2007 is inextricably linked to state intervention to deal with the crisis and its aftermath. One of the most important aspects of government policy was to lower public interest rates. The federal funds rate of the Federal Reserve was driven close to zero, which means that, in real terms (i.e., subtracting the rate

of inflation), the federal funds rate has actually been negative for the entire period since 2009. The increase in US government debt is thus the counterpart of near-zero interest rates.

The indispensable role of public debt in sustaining the US economy after the crisis has been stressed by Hager (2016). His work emphasises that the global financial system was rescued from the brink of collapse by the explosive rise in public indebtedness, so that the actions taken by the US government provided vital support to financialisation. Consequently, domestic ownership of public debt has become increasingly concentrated in the hands of wealthy households and large corporations during the last 35 years, especially in the period since the crisis. Growing concentration of ownership in US public debt has also reinforced unequal power relations in society.

Additionally, confronted with the zero lower bound for nominal interest rates and having exhausted the traditional tools of monetary policy, the Fed resorted to unconventional policy measures. It purchased large amounts of securities in what became known as “quantitative easing” or “large scale asset purchase program” in order to lower yields on longer-term assets in the hope of accelerating economic recovery. However, as Montecino and Epstein (2015) mention, another plausible reason behind the implementation of such monetary policies could be that the Fed attempted to help its main constituency, the large banks, faced with the fall-out from the financial crisis. Their results show that banks which sold mortgage-backed securities to the Fed experienced economically and statistically significant increases in profitability (measured by the return on assets). Moreover, they also find evidence of indirect spillover effects on bank profits: “exposure” banks (banks with large holdings of

mortgage-backed securities relative to total assets prior to the Great Recession) experienced significant increases in profitability relative to “non-exposure” banks. This means that banks able to sell mortgage-backed securities in the course of quantitative easing obtained further economic benefits in addition to the benefits experienced by the financial sector as a whole.

At the same time, however, the US state has changed the regulatory environment through the Dodd-Frank Act, making it harder for large deposit-taking banks to engage in financial trading.¹³ Without dramatically altering the regulatory framework of financialisation, the Dodd-Frank Act passed into law in 2010 has aimed at reducing speculative risk-taking by large banks. It has also aimed at creating a framework that would allow large banks to fail without presumably endangering the financial system, and thus requiring rescue from public funds. In addition, the so-called “Volcker Rule”, included in the Act and operational since 2013, has prohibited banks from engaging in proprietary trading on their own account, while severely limiting bank ownership of hedge funds or private equity funds. To strengthen the prudential aspect of the Act, furthermore, the US central bank has been given greater supervisory powers over capital, liquidity and leverage of large banks. The Dodd-Frank legislation has affected the ability of banks to extract non-interest income by engaging in market transactions.

The final piece of evidence relates to the composition of declining US household debt. Figure 7 tracks the composition of this debt in terms of mortgage and consumer debt relative to disposable personal income. It shows a significant relative decline in mortgage debt since the crisis. At the same time,

consumer debt registered a dip relative to disposable income at the time of the crisis, and has returned to a mildly upward trend since then. The structural breaks for each series are detected around 2007Q1–2007Q3 and 2005Q3–2007Q3, respectively. Note that mortgage debt is by far the decisive component of household debt. On these grounds, household and worker income has lost some of its importance as a source of potential profit –in terms of both interest and non-interest income– for US financial institutions since 2007.

[INSERT FIGURE 7 ABOUT HERE]

The deleveraging of US households has been well documented by recent work. Jian and Sánchez (2016) show that the deleveraging may have been caused by the declining willingness of households to borrow (operating on the side of credit demand) instead of a tightening of borrowing constraints (operating on the side of credit supply). Garriga et al. (2017) stress the substantial changes in debt composition that have taken place. Prior to the Great Recession, there were large run-ups in the average debt per borrower for both student debt and mortgage debt; after the crisis mortgage debt has decreased but student debt has continued to grow. Focusing on the decline in mortgage debt, Bhutta (2012) finds that the drop in mortgage debt has to do more with shrinking inflows (which come from borrowers who increase their mortgage debt during a given two-year window) than with expanding outflows (which come from borrowers who decrease their mortgage debt during that window), including defaults.¹⁴

4. Further aspects of households, housing and finance in the USA since the Great Recession

Crises can be turning points in capitalist development. The discussion and evidence on key macroeconomic indicators for the USA point to a watershed for, or even a relative halt of, financialisation during the period following the Great Recession of 2007-9. On the one hand, the debt of non-financial enterprises indicates a continuing relative detachment from banks supported by access to own funds. On the other, US households have substantially lowered their exposure to the formal financial system, which is reflected mainly by the decline in mortgage debt. The formal financial system, meanwhile, has reduced debt created among financial enterprises. These developments have had a substantial impact on banks, contributing to a relative decline in financial profit.

The policies of the US government during this period have had additional and complex effects on financialisation. The dramatic reduction in the Fed funds interest rate, the quantitative easing policy, and the abundant provision of liquidity by the state allowed banks to deal with the shock of the crisis of 2007-9. However, liquidity provision over several years has raised state indebtedness to levels that are extraordinary for the post-war period. Moreover, regulatory intervention by the US government has lessened the scope for purely speculative bank activity, thus further constraining the profits of banks. Thus,

financialisation in the USA since the Great Recession has carried a strong and complex imprint by the state, both supporting and inhibiting its development.

Nevertheless, the reduced exposure of US households to mortgage debt in relative terms is perhaps the most striking change in the components of aggregate private debt during the last decade. Housing and mortgage credit have been of paramount importance during the period of financialisation in the USA and elsewhere, not least by providing new sources of financial profit.¹⁵ Therefore, assessing the significance of the decline in mortgage debt in the USA ought to depart from the peculiar character of household debt.

Bank lending involves the advance of value in the money form against a promise of repayment with interest. Borrower and lender engage in complex relations that rest on the borrower's ability to generate funds to make repayments, and on the lender's ability to impose conditions ensuring repayments. The relationship between banks and non-financial enterprises as, respectively, lenders and borrowers is driven by the innate logic of capital accumulation and profit making for both parties. Thus, the decisions to borrow, lend, and engage in financial transactions would be based on the search for profits; and their relationship as lenders and borrowers would be shaped by comparable expertise, information and motivation in extracting monetary profits.

In contrast, the relationship between financial institutions and households and wage workers is qualitatively different. Households and wage workers are driven by the logic of obtaining the means of subsistence –or fulfilling consumption needs, while for financial institutions the logic remains that

of profit making. Their relationship represents a clash of qualitatively different principles, and an unequal balance of information and power. Debt could allow households to fulfil consumption needs in excess of the value of current earnings and possible savings. At the same time, debt could also place households and wage workers in a systematically disadvantageous position due to the unequal relationship with lenders. Repayments on household debt are generally made out of future income earnings, and represent an appropriation of value, thus providing a foundation for financial expropriation of households and wage workers.

The decision by households to increase or decrease their debt cannot be explained by relying exclusively on economic criteria that refer to the maximisation of returns. The development of consumption needs, norms, habits, and expectations takes place also through complex non-economic processes. Consequently, financial decisions by households can also be modified by the interaction between social norms, cultural trends, and institutional changes. Both the volume of household debt and the flow of service payments on such debt will also depend on the concrete evolution of non-economic factors.

In this light, it would be misleading to assume that US households from the early 1980s to the late 2000s became heavily indebted simply because wages, salaries and other forms of income were “insufficient” for the purposes of obtaining the means of subsistence. Goldstein (2013) has provided evidence that the patterns of the ratio of debt to income in the USA for the period 1988-2007 are less consistent with an explanation based on an income squeeze and more consistent with the spread of a culture of reliance on finance. The growth

of debt to income was concentrated disproportionately among college-educated, upper-middle income households, rather than the lower-middle class households which felt the effects of the income squeeze most acutely. As discussed in Section 2, finance has come to pervade the lives of US households in far more complex ways, which have to do with the balance between the public and private provision of key goods and services as well as changes in the norms of consumption.

In accounting for the composition of household debt, therefore, reference ought to be made to the different systems of housing provision that reflect historical, institutional and even cultural aspects of housing expenditure.¹⁶ The paper by Fernandez and Aalbers (2016) is of relevance in this respect, referring, on the one hand, to the rise of housing finance as an integral part of macroeconomic policy and, on the other, to the role of financial globalization in the rise of housing finance. According to them, under financialised capitalism, there is a “wall of money” –given the growing imbalance between the growth rate of the stock of capital and GDP– looking for profitable investment. This wall of money fuels a variety of traditional and “innovative” financial instruments that could perhaps better be characterized as a “financial fix”: an emergent financial landscape in a permanent state of stable instability that enables a continuous circulation of capital outside the sphere of production.

In this light, the structural break in mortgage debt in the USA is a development of considerable importance for it indicates that a vital element of financialisation with regard to labour and households has been weakened by the Great Recession. What is beyond dispute is that the large decline of

household debt relative to GDP and of mortgage debt relative to disposable personal income is unprecedented since the early 1980s. From a longer-term perspective it would appear that the tremendous growth of mortgage finance in the 2000s was an exception in the post-war years propelling financialisation forward but coming to an end after the crisis.

Equally complex factors have contributed to the rise of consumer debt among US households. The exposure of labour to financialisation is far more complex than the simple syllogism “insufficient wages lead to higher debt”. The trajectory of consumer debt reflects the existence of secure employment (or lack thereof), the degree of unionisation and, more particularly, the type of access to consumer credit, i.e., personal loans, credit cards, and so on. The literature on consumer debt indicates that changes in the level of personal or household indebtedness are related to the easy availability of credit and to the broader social dimensions of consumer behaviour, which can influence the preferences of individuals through the media and otherwise. Barba and Pivetti (2009) and Cynamon and Fazzari (2010), for example, emphasise, first, the growth of indebtedness as a result of the continuous people’s desire to improve their individual material well-being –which includes imitation of the upper classes; and, second, how social institutions create preferences and expectations over time, so that households and labour learn and repeat consumption patterns from their social reference groups –which could be constituted by neighbours, family, and friends, but they could also be virtual, arising from behavioral models portrayed by the media.

The structural breaks in consumer debt and mortgage indebtedness by US households at the time of the Great Recession are, therefore, developments

of significance. The reliance of US labour on credit for consumption purposes seems to have resumed a rising trend after the crisis in view of stagnating wages and salaries, but also given the prevalent norms of borrowing for consumption. In sharp contrast, the links of US labour to the formal financial system have significantly weakened with regard to mortgages, i.e. the most important element of household credit. Judging by this differential performance, it is possible that the norms and practices of housing in the USA have changed since the Great Recession, perhaps in view of the costs that the collapse of the housing bubble entailed for US households. Be that as it may, there is no doubt that at the aggregate level a historic retrenchment has taken place with regard to mortgage debt, constituting a new development for the USA in the post-war years.¹⁷

5. Concluding remarks

The path of the main indicators of financialisation in the USA at the aggregate level since the Great Recession bring to mind Crotty's (2008, p. 182) comment on the eve of the Great Recession: "I find it hard to believe that financial markets can continue to grow forever at the rapid pace of the current era, or that giant firms piling up unprecedented if hidden risk will never suffer the consequences. No one knows what dangers are hidden off their balance sheets, or in obscure footnotes in incomprehensible financial reports, or in the massive leverage they have created. The current Golden Age of finance may end with a whimper, or ... it could go out with a bang. But at some point not knowable today, it will end."

There is good reason to think that Crotty was right about the likely end of the “Golden Age of finance”. The period since the end of the Great Recession has certainly not been a “Golden Age” judging by the most important indicator, i.e., financial profits. Moreover, aggregate private debt has declined, and the drop has been particularly notable for mortgage debt. In contrast, the accumulation of government debt has greatly expanded, as the government has supported the financial system by providing liquidity and implementing unconventional monetary policies. Financialisation has acquired a stronger public dimension and financial institutions have come to rely more heavily on the state; but the regulatory financial policies implemented also seem to have affected negatively the evolution of financial profits.

This is not to imply, however, that the US financial system is no longer prone to bubbles and instability. The US economy remains complexly financialised, and easy access to liquidity provided by the state has boosted financial asset prices, as a mere glance at the Stock Market in 2017-8 would indicate. However, the stagnation of financial profits, the decline in mortgage debt and the drop in financial debt, which have been counterbalanced by the rise in public debt, indicate a relative weakening of financialisation in the years since the Great Recession.

The future path of financialisation in the USA is likely to depend critically on government policies. It is conceivable that the US government will once again loosen the constraints on financial activity, thus giving a fresh boost to financialisation. Yet, the US government remains constrained by the enormous burden of public debt accumulated as a result of the crisis of 2007-9. Moreover, it is not in the state’s gift rapidly to increase mortgage debt, and it would be

utterly reckless to seek to intensify once again the reliance of labour on the formal financial system with regard to mortgages. Furthermore, the Federal Reserve has recently started to raise interest rates in a sustained fashion, even if the risks are manifest in view of rising consumer debt and the tremendous increase in government debt. In sum, although the future trajectory of financialisation is likely to depend on government policies, the scope for boosting financialisation is narrow. A financialised economy characterised by stagnant financial profits that continues to drift in the long run is also a latent possibility.

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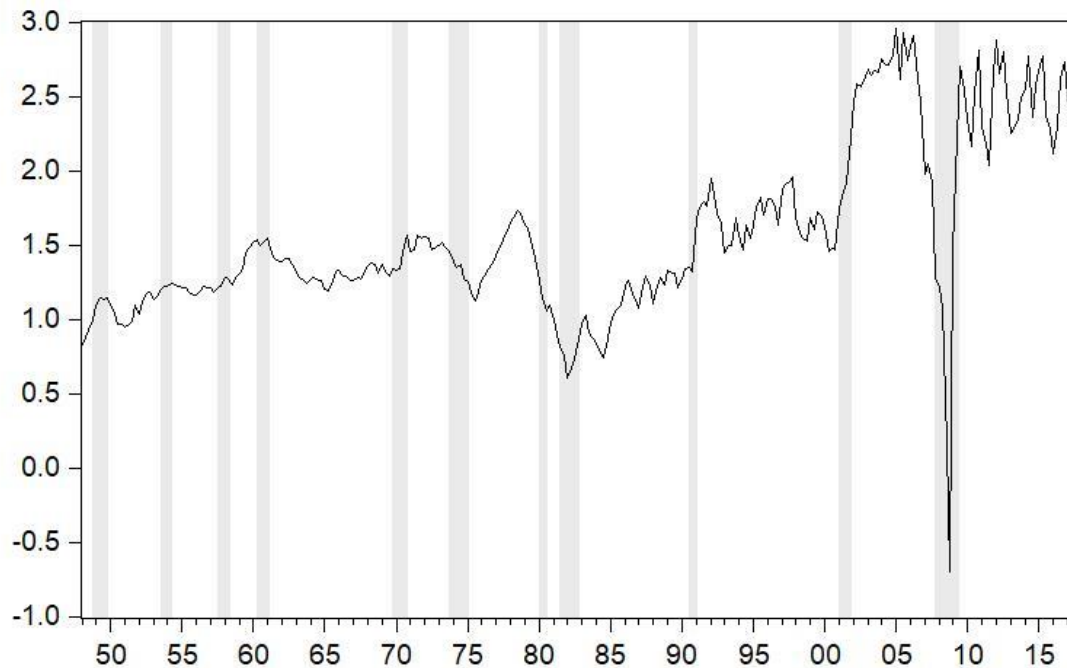
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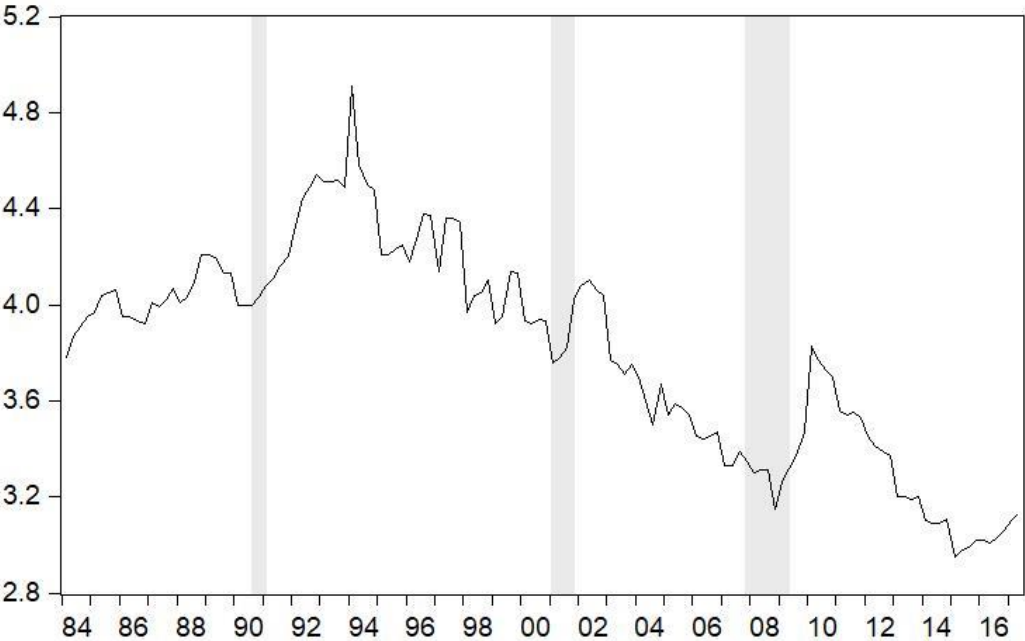
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Figure 1. USA, 1948Q1-2017Q2 (quarterly data). Financial profits as percentage of GDP



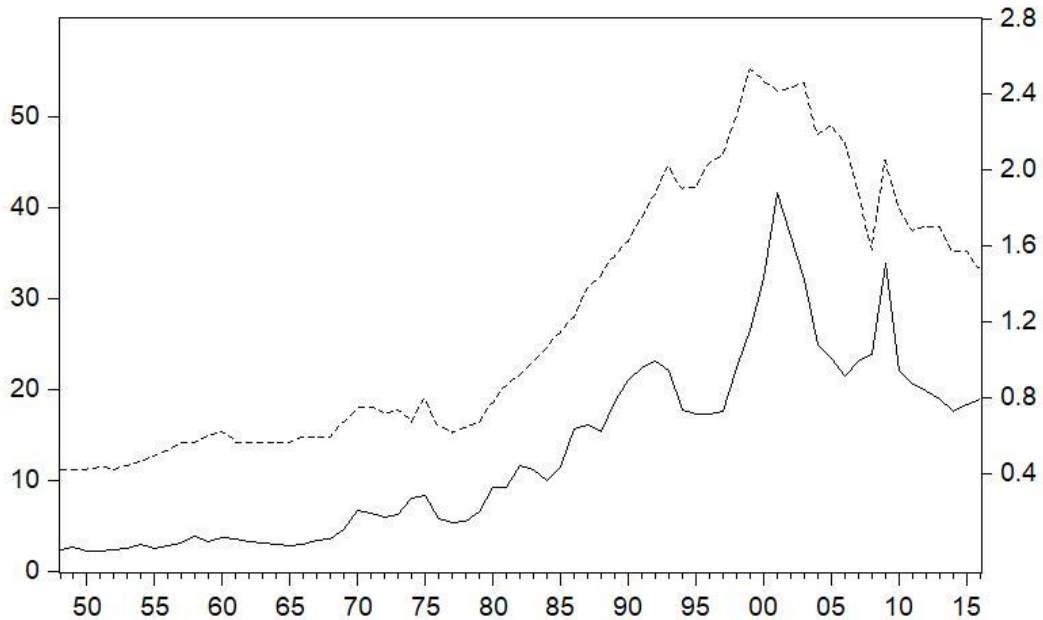
Source: Own elaboration using data obtained from the National Income and Product Accounts (NIPA) and the Federal Reserve Bank of St. Louis (FRED). [Financial profits: NIPA, Table 6.16. Corporate Profits by Industry; Nominal GDP: FRED, GDP series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Figure 2. USA, 1984Q1-2017Q2 (quarterly data). Net interest margin for all banks, in percentage



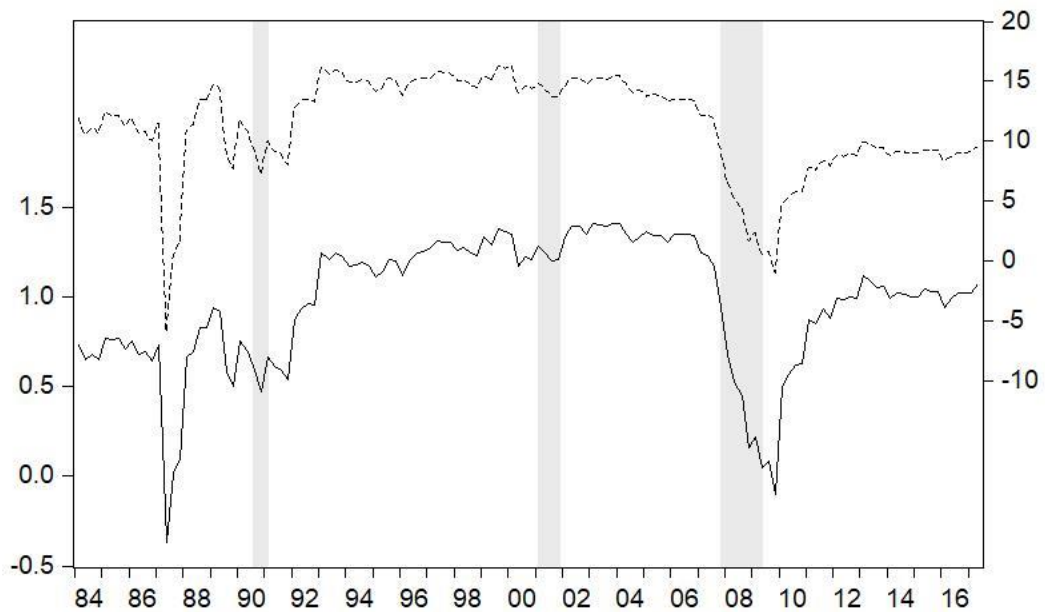
Source: Data obtained from the Federal Reserve Bank of St. Louis (FRED). [Series: USNIM]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Figure 3. USA, 1948-2016 (annual data). Non-interest income for all commercial banks as percentage of non-financial corporate profits (straight line, left axis) and as percentage of total assets for all commercial banks (dotted line, right axis)



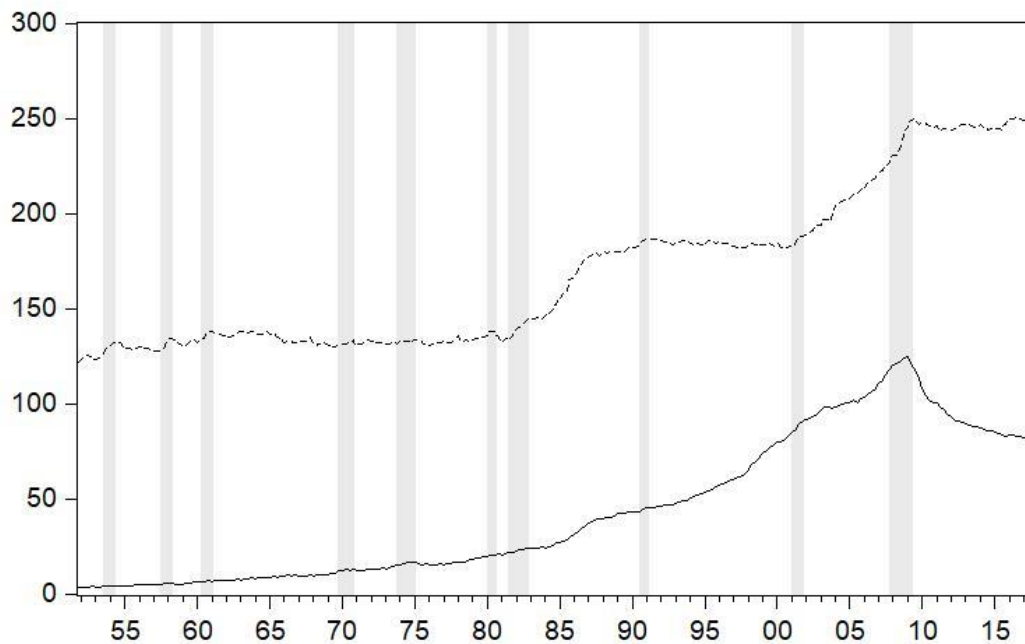
Source: Own elaboration using data obtained from the Federal Deposit Insurance Corporation (FDIC) and from the National Income and Product Accounts (NIPA). [Non-interest income for commercial banks: FDIC, Table CB04. Net Income for all Insured Commercial Banks; Total assets for commercial banks: FDIC, Table CB09. Assets for all Insured Commercial Banks; Non-financial corporate profits: NIPA, Table 6.16. Corporate Profits by Industry].

Figure 4. USA, 1984Q1-2017Q2 (quarterly data). Return on average assets (straight line, left axis) and return on average equity (dotted line, right axis) for all banks



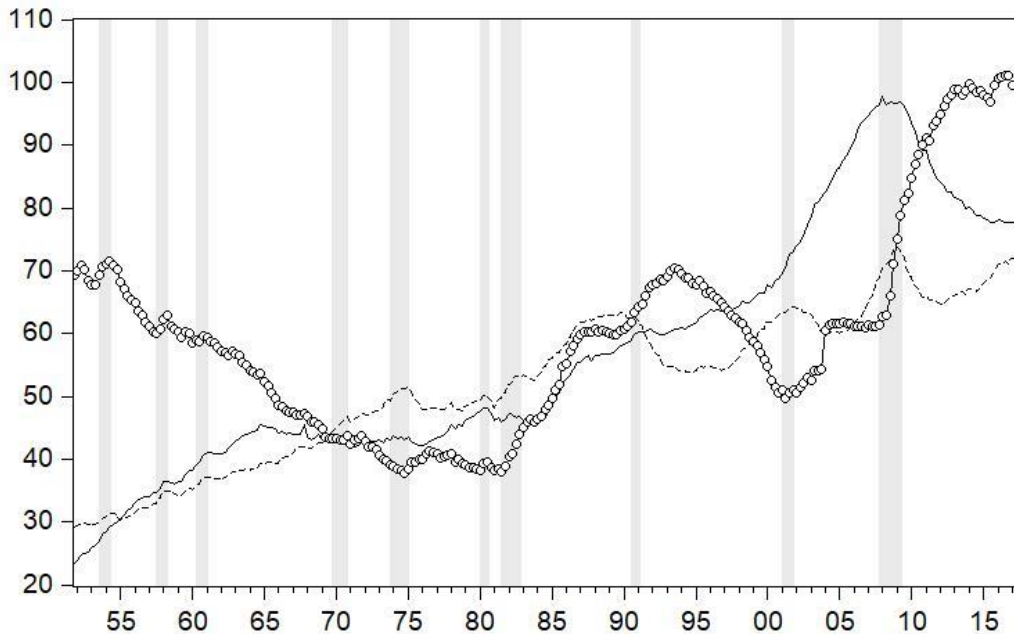
Source: Data retrieved from the Federal Reserve Bank of St. Louis (FRED). [Return on average assets: FRED, USROA series; Return on average equity: FRED, USROE series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Figure 5. USA, 1951Q4-2017Q2 (quarterly data). Financial sector debt as percentage of GDP (straight line) and non-financial sector debt as percentage of GDP (dotted line)



Source: Own elaboration using data obtained from the Federal Reserve Board of Governors (FRB) and from the Federal Reserve Bank of St. Louis (FRED).
 [Financial sector debt: FRB, Table D.3. Debt Outstanding by Sector, LA794104005 series; Non-financial sector debt: FRB, Table D.3. Debt Outstanding by Sector, LA384104005 series; Nominal GDP: FRED, GDP series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Figure 6. USA, 1951Q4-2017Q2 (quarterly data). Non-financial sector debt: Households and non-profit organizations debt as percentage of GDP (straight line), non-financial business debt as percentage of GDP (dotted line), and federal, state and local governments debt as percentage of GDP (line with circles)

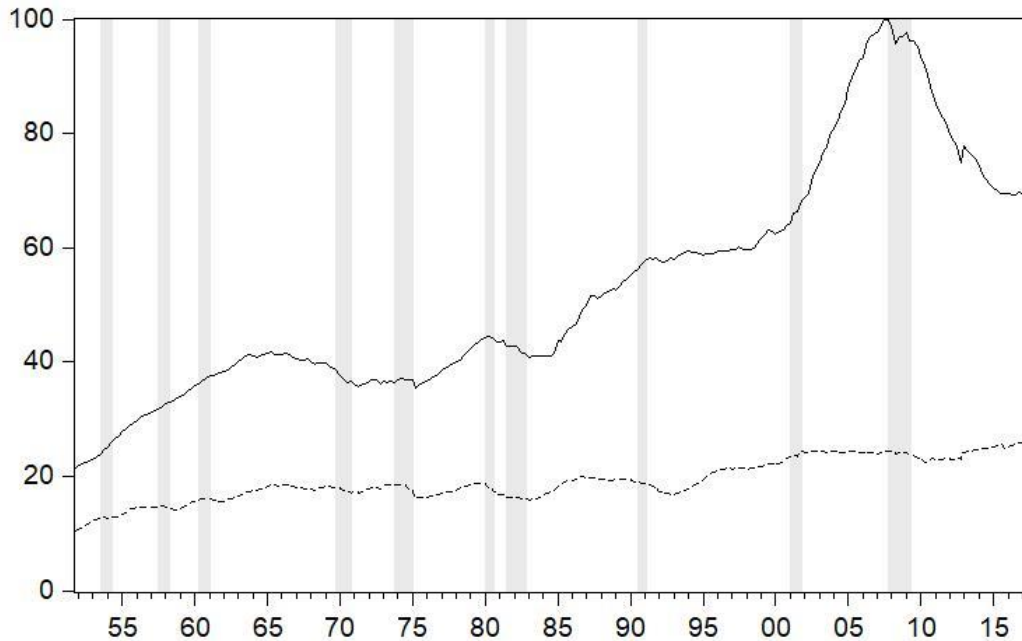


Source: Own elaboration using data obtained from the Federal Reserve Board of Governors (FRB) and from the Federal Reserve Bank of St. Louis (FRED).

[Households and non-profit organizations debt: FRB, Table D.3. Debt Outstanding by Sector, LA384104005 series; Non-financial business debt: FRB, Table D.3. Debt Outstanding by Sector, LA144104005 series; Federal, state and local governments: FRB, Table D.3. Debt Outstanding by Sector, LA314104005 + LA214104005 series; Nominal GDP: FRED, GDP series].

Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Figure 7. USA, 1951Q4-2017Q2 (quarterly data). Households and non-profit organizations sector debt: Home mortgages as percentage of disposable personal income (straight line) and consumer credit as percentage of disposable personal income (dotted line)



Source: Own elaboration using data obtained from the Federal Reserve Board of Governors (FRB) and from the Federal Reserve Bank of St. Louis (FRED). [Home mortgages: FRB, Table D.3. Debt Outstanding by Sector, LA153165105 series; Consumer credit: FRB, Table D.3. Debt Outstanding by Sector, LA153166000 series; Disposable personal income: FRED, DSP1 series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Variables	Number of breaks selected ^a	Breakpoint dates ^b	Corresponding confidence intervals at the 95% level ^c
Financial profits as percentage of GDP (Figure 1) ^d	3	1981Q1 1993Q1 2006Q2	1970Q3 – 1981Q2 1984Q2 – 2001Q1 2004Q3 – 2017Q1
Net interest margin (Figure 2) ^d	2	1992Q1 2009Q3	1991Q4 – 1992Q3 2007Q3 – 2009Q4
Non-interest income as percentage of non-financial corporate profits (Figure 3) ^d	3	1976 1993 2003	1975 – 1977 1985 – 1994 2002 – 2005
Non-interest income as percentage of total assets (Figure 3) ^d	2	1976 1998	1975 – 1977 1997 – 1999
Return on assets (Figure 4) ^d	3	1991Q4 2004Q4 2009Q4	1991Q3 – 1996Q1 2003Q4 – 2005Q1 2009Q3 – 2010Q2
Return on equity (Figure 4) ^d	3	1991Q4 2004Q4 2009Q4	1991Q3 – 1998Q2 2003Q4 – 2005Q1 2009Q3 – 2010Q2
Financial sector debt as percentage of GDP (Figure 5) ^e	4	1973Q3 1986Q3 1997Q4 2007Q3	– ^f 1986Q2 – 1986Q4 1996Q3 – 1998Q1 2007Q2 – 2007Q4
Non-financial sector debt as percentage of GDP (Figure 5) ^e	5	1965Q2 1977Q3 1987Q2 1997Q1 2007Q3	1965Q1 – 1967Q1 1977Q1 – 1977Q4 1987Q1 – 1988Q2 1996Q4 – 1997Q2 2007Q1 – 2007Q4
Households and non-profit organizations debt as percentage of GDP (Figure 6) ^e	5	1964Q3 1975Q1 1984Q4 1997Q4 2007Q3	1964Q2 – 1964Q4 1973Q4 – 1975Q2 1984Q3 – 1985Q1 1997Q3 – 1999Q1 2007Q2 – 2007Q4
Non-financial business debt as percentage of GDP (Figure 6) ^e	4	1975Q4 1985Q3 1997Q4 2007Q3	1967Q4 – 1976Q2 1985Q1 – 1985Q4 – ^f 2004Q1 – 2008Q1
Federal, state and local governments debt as percentage of GDP (Figure 6) ^e	4	1965Q2 1981Q2 1996Q1 2007Q1	1961Q4 – 1974Q4 – ^f – ^f 2005Q1 – 2007Q3

Table 1 (continuation). Endogenous structural break tests			
Variables	Number of breaks selected ^a	Breakpoint dates ^b	Corresponding confidence intervals at the 95% level ^c
Home mortgages as percentage of disposable personal income (Figure 7) ^e	5	1965Q2 1975Q1 1984Q4 1995Q4 2007Q2	1964Q4 – 1965Q3 1963Q2 – 1975Q2 1984Q3 – 1985Q1 1995Q3 – 1996Q1 2007Q1 – 2007Q3
Consumer credit as percentage of disposable personal income (Figure 7) ^e	4	1963Q2 1982Q3 1992Q3 2007Q2	– ^f – ^f 1992Q2 – 1992Q4 2005Q3 – 2007Q3

Notes: ^aBai and Perron's (1998; 2003) algorithm, which estimates the optimal number of breakpoints by minimizing the residual sum of squares (RSS) of a regression model. The number of breakpoints were selected according to the Schwarz information criterion (BIC).
^bIndicate the last date of each regime.
^cA description of the distribution function used to estimate the confidence intervals for the breakpoints can be found in Zeileis and Kleiber (2005).
^dRegression model employed: $y_t = a_0 + a_1(t) + u_t$, where y_t is the time-series under consideration, a_0 is the intercept, t is a linear deterministic trend, a_1 is the coefficient on the latter, and u_t is the error term.
^eRegression model employed: $y_t = a_0 + a_1(t) + a_2(t^2) + u_t$, where y_t is the time-series under consideration, a_0 is the intercept, t is a linear deterministic trend, a_1 is the coefficient on the latter, t^2 is a quadratic trend, a_2 is the coefficient on the latter, and u_t is the error term.
^fIt was not possible to estimate these confidence intervals using the Zeilis and Kleiber (2005)'s procedure.

ENDNOTES

¹We are grateful to the editors of the journal and two anonymous referees for comments on previous versions of this paper. All remaining errors are the authors' responsibility.

²The term was originally proposed by Lapavitsas (2009), and was developed further in Lapavitsas (2013). See also Dos Santos (2009).

³For a more detailed discussion of similarities and differences among heterodox approaches see Orhangazi (2011).

⁴Both empirical dimensions have also been emphasised as the main indicators of financialisation at the macroeconomic level by Krippner (2005) and Palley (2010).

⁵Bai and Perron's (1998; 2003) algorithm estimates the optimal number of breakpoints by minimizing the residual sum of squares (RSS) of a regression model. We also included a quadratic trend (t^2) in the regression if the latter was found to be statistically significant at the 1% level of significance (see notes d and e in Table 1 below).

⁶In brief, we used a kernel heteroskedasticity and autocorrelation consistent (HAC) estimator with a quadratic spectral kernel, pre-whitening using a vector autoregressive model of order 1 (VAR(1)) and an autoregressive of order 1 (AR(1)) approximation for the automatic bandwidth selection. See also Bai and Perron (2003) and Zeileis and Kleiber (2005).

⁷It is worth stating that, ideally, the presence of structural breaks would need to be tested using a comprehensive framework connecting the effects of different types of debt (or leverage ratios) on financial profits. To the best of our knowledge, such a structural model has not yet been developed for financialisation.

⁸Measuring financial profits is a difficult task both conceptually and empirically. For further analysis of the technical difficulties of measuring financial profits in the USA see Lapavitsas and Mendieta-Muñoz (2016).

⁹The Volcker Shock was a decisive event in catalysing financialisation in the USA since it involved a dramatic increase in interest rates with the aim of lowering inflation. The rise in interest rates engineered by the Federal Reserve after Paul Volcker becoming Governor in 1979, and the deep recession of the late 1970s and early 1980s substantially reduced financial profits. However, the lowering of inflation combined with deregulation of finance rebounded in favour of lenders and capitalists engaged in finance, ushering in a period of sustained growth of financial profits for about two decades.

¹⁰The large confidence interval associated with this breakpoint date reflects the uncertainty of this period.

¹¹Following Lapavitsas and Mendieta-Muñoz (2017), we consider that NII represents a proportion of total profits in the economy. Thus, the correct way to study the evolution of NII is as a percentage of non-financial corporate profits. We also plotted NII as a percentage of total assets as a robustness check.

¹²Note that the absolute levels of consumer and mortgage debt (trillions of US dollars) have been gently rising in recent years, and consumer debt has surpassed its earlier peak. However, the relevant variable for purposes of analysis is the relative level of debt, i.e., the level of debt with respect to GDP or disposable personal income. Essentially, these ratios reflect real indicators rather than nominal indicators. There is no doubt that the relative levels of debt have not recovered to the pre-Great Recession heights.

¹³The Dodd-Frank Act is a heroically long and complex piece of legislation, rising to 849 pages, the interpretation of which has generated a veritable army of lawyers and others employed by big banks. Not surprisingly, the academic literature on its impact has been very limited. The Act is available at <https://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf> (accessed 28 December 2016).

¹⁴Note that, as discussed by Kiyotaki et al. (2011), the availability of mortgage debt is a key factor in increasing house prices. The fall in mortgage debt since the crisis has affected negatively the evolution of real residential property prices.

¹⁵The seminal paper by Aalbers (2008) emphasised the growing importance of mortgage debt in the composition of household debt in several developed countries. Aalbers (2015) subsequently pointed out that the start of the so-called "Great Moderation" in the economy in

the 1990s and 2000s was also the start of the financialisation of housing. What appeared to be a structural moderation of macroeconomic cycles was in fact the build-up of a bubble economy.

¹⁶Aalbers and Christophers (2014) noted that the peculiar nature of housing has not received sufficient attention in the literature, even though there have been contributions in the literature on the “Varieties of Capitalism” examining different modes of provision of housing. One important exception is Schwarz and Seabrook (2009), who distinguish among modes of provision of housing by examining the relative weight of mortgage finance and the mix of home-ownership and rental accommodation.

¹⁷The sharpness of the reaction is reminiscent of the change in popular outlook toward debt in Japan after the burst of the great bubble of the 1980s, without implying that the path of household financialisation in the USA will be henceforth similar to Japan.