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Abstract

Since the Great Recession of 2007-9 the financialisation of the US economy has reached a watershed characterised by stagnant financial profits, falling mortgage debt and rising public debt. The reliance of households on the formal financial system appears to have weakened for the first time in the post-war period. The financial sector has lacked the dynamism characteristic of the previous three decades and has become more reliant on the state, which has greatly increased its own indebtedness and has driven public interest rates close to zero. 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 to financial regulation.

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JEL Classification: B50, E10, E44, G20.

1. Introduction

The financial sector in the USA has generally tended to expand during the post-war era, despite numerous economic crises. The march of finance has seemed relentless during the last four decades, giving rise to the concept of the 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 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.

Several 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 by households has declined substantially for the first time in the post-war period, a development with potentially significant implications for the financial system. A structural break has occurred in the historic reliance of US households on mortgage debt for housing. Third, the US government has provided support to financial institutions by lowering nominal interest rates in the vicinity of zero, 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 indicate that financialisation has stopped advancing 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 were renewed, 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. In light of this evidence, section 4 explores some relevant theoretical issues with regard to the relationship between households and finance. Finally, section 5 concludes.

2. Financialised capitalism

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 regime 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 regime of 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 period 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". Lapavitsas (2011, 2013) summed up the characteristic features of financialised capitalism as the following three tendencies: first, non-financial corporations hold substantial amounts of liquid money capital used to extract financial profit, thus reducing their reliance on financial corporations; second, financial corporations are less engaged in supporting investment by non-financial enterprises, turning instead toward trading in financial markets and transacting directly with households; and, third, households and individual workers have been drawn heavily into the formal financial system both to borrow and to place available saving. The implications have been decisive, giving to financial profits a "direct" aspect associated with transactions in financial markets as well as with households, in contrast to the "indirect" extraction of surplus value in production. This feature of financial profits has been termed "financial expropriation".[1]

Important in this respect is the "dual movement" of non-financial corporations. The latter have increasingly derived profits from financial activities, but they have also augmented 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 heterodox economists have emphasised the role of the rentier (the functionless money holder that makes capital available for lending) 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.[2]

Note that the literature on financialisation as a regime 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 to 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 impact of the ideology of shareholder value was also developed by Clark (2009), who stressed the further destabilisation of labour relations caused by the 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.

3. Financialisation in the USA since the Great Recession

In light of the literature, the crisis of 2007-9 can be considered as the culmination of tendencies characteristic of the period of financialisation (Lapavitsas, 2009). 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 by the Federal Reserve based on its 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 following the crisis we present indicators from two fields which capture its main empirical features at the macroeconomic level by drawing on the literature on financialistion as a regime of accumulation.[3] These are, first, the profits (or income share) of the financial sector; and,

second, the accumulated debt of households, the financial sector and the non-financial corporate sector. We discuss the evolution of these indicators in the USA during the post-war period focusing particularly on developments since the Great Recession.[4]

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.[5]

[INSERT FIGURE 1 ABOUT HERE]

Financial profits in the US economy declined substantially in the late 1970s and early 1980s, the time of the "Volcker Shock", which led to turmoil in the financial system. They then entered a period of sustained increase for two decades, lasting until the early 2000s. After 2006 financial profits declined sharply, until collapsing in the course of the crisis 2007-9. The manic real estate speculation that preceded the crisis can be interpreted as the response of US financial institutions to the environment of stagnant profitability that had lasted for years. 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, which sums up the statistical tests for endogenous structural breaks in the data deployed in this paper, there is a statistically significant structural break in the series on financial profits in 2007.

[INSERT TABLE 1 ABOUT HERE]

To explain the historic trajectory of financial profits, the model developed by Lapavitsas and Mendieta-Muñoz (2017) identifies two fundamental variables. First, 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, non-interest income (NII), i.e., financial institution income deriving mostly from fees, commissions

and proprietary trading. The empirical analysis shows that the former is the most important explanatory factor of 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 is shown in Table 1, the NIM series presents a structural break in 2010. 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. 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.[6]

[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 with regard to 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 apparent 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 detected for both the ROA and ROE presented in Table 1, respectively, in 2010 and 2008.

[INSERT FIGURE 4 ABOUT HERE]

In sum, the trajectory of financial profits in the US economy appears to have experienced a structural break 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. Falling financial debt and stagnant non-financial debt

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 a breakpoint in 2007 for financial debt but not for the debt of the non-financial sector.

The contraction of aggregate financial debt is consistent with banks having fewer opportunities to generate non-interest profits out of financial transactions. It is *prima facie* evidence of a relative slow-down of financialisation.

[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.

[INSERT FIGURE 6 ABOUT HERE]

It is immediately apparent that household debt has declined significantly as a proportion of GDP for the first time since 1955. 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 since 1955 –as shown in the next section,

associated almost exclusively with a fall in mortgage debt– indicates that the penetration of finance into household life in the USA has been attenuated during this period. As is shown in Table 1, the presence of a structural break in 2007 for the household debt series can be corroborated statistically.

At the same time, the debt of the US non-financial business sector, i.e., of the core 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 after the Great Recession. Again, the presence of a breakpoint in this series can be detected statistically for 2007 using the endogenous structural break tests presented in Table 1.

Finally, government debt has risen substantially, thus entirely counterbalancing the fall in household debt. From Table 1 it is possible to observe that a structural break occurred in the government debt series in 2007 and is statistically significant. Rising US government debt since 2007-9 is inextricably linked to state intervention to deal with the crisis and its aftermath. The most important aspect of government policy was to lower public interest rates. The federal funds rate of the Federal Reserve was driven close to zero as the central bank continued to provide abundant liquidity to banks. 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). The global financial system was, thus, rescued from the brink of collapse by the explosive rise in public indebtedness, and the actions taken by the US government have provided vital support to financialisation. 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.

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.[7] 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. Together with the contraction of financial debt, it appears to have had a significant impact on financial profits.

In sum, US government intervention has had complex effects on financialisation. Provision of liquidity by the state and driving interest rates close to zero has allowed banks to deal with the shock of the crisis; but liquidity provision has also dramatically increased state indebtedness. Moreover, regulatory intervention by the state has lessened the scope for purely speculative bank activity, thus further constraining the profits of banks.

3.3. Household deleveraging

The final piece of evidence relates to US households, already mentioned in the previous section with reference to the substantial reduction in their aggregate indebtedness relative to GDP. Figure 7 tracks the composition of US household debt in terms of mortgage and consumer debt relative to disposable personal income.

[INSERT FIGURE 7 ABOUT HERE]

The figure shows a significant 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 presence of a structural break in 2007 in both series is corroborated by the tests presented in Table 1. 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 profit –in terms of both interest and non-interest income– for US financial institutions since 2007.

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.[8]

Summing up, the empirical evidence presented in this section indicates that the crisis of 2007-9 can be regarded as a watershed in the development of financialisation in the US economy. Specifically,

1. The profits of the US financial sector have not recovered a rising trend, as indicated both by the aggregate behaviour of all relevant measures and the individual trajectory of the NIM and the NII of banks.
2. The ratio of financial sector debt to GDP has decreased substantially for the first time since the end of the Second World War. Meanwhile, the ratio of the debt of the non-financial sector to GDP has not increased in a sustained manner.
3. The composition of the debt of the non-financial sector has changed greatly. Crucially, the debt of the household sector has declined, while the debt of the government has increased dramatically.
4. The relative decline in household debt has been associated mainly with a fall in mortgage debt.

Crises can be turning points in capitalist development. The characteristic features of the last decade reflect in part the sustained intervention of the US state in the realm of finance, which has resulted in increased state indebtedness; but they also reflect the altered conduct of US households with regard to debt. The impact on US banks has been considerable, thus contributing to a relative decline of financial profits in the aggregate. On these grounds, the main indicators of financialisation at the macroeconomic level in the USA seem to show that the latter has reached a watershed after the Great Recession and its future path lies in the balance. Further insight into this

issue can be gained by considering more closely the relationship between US households and finance.

4. Households, housing and finance in the USA

Housing has been of paramount importance during the period of financialisation, not least by providing new sources of financial profit. As Jordà et al. (2016) emphasise, mortgage credit on the balance sheets of banks has been a driving force in the financialisation of advanced economies as well as an important source of financial instability in the post-war era. It has also left its mark on business cycle dynamics since mortgages have increased their weight in total financial sector activity.

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 accumulate more debt, or equivalently to reduce indebtedness, 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.

The seminal paper by Aalbers (2008) has also emphasised the growing importance of mortgage debt in the composition of household debt in several developed countries. Aalbers (2015) has 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.

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. Aalbers 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.

The paper by Fernandez and Aalbers (2016) is also 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.

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.

In this context, Barba and Pivetti (2009) discuss the growth of indebtedness as a result of people's desire continuously to improve their individual material well-being, which includes imitation of the upper classes. Cynamon and Fazzari (2010) stress that multilayered institutional structures in contemporary societies condition individual behaviour and the decision making of individuals with respect to consumption. Social institutions create preferences and expectations over time, and households and labour learn and repeat consumption patterns from their social reference groups. A "group identity" is important in introducing individuals to new products as well as providing

knowledge in how to appreciate, enjoy, and (consequently) desire new products. "Group identities" also condition expectations about future outcomes and the kinds of behaviour that would be considered "normal." The reference groups for individuals and households 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 recovered 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 the most important element of household credit, i.e., mortgage debt, reflecting changes in the norms and practices of housing in the USA.

The Great Recession has entailed large costs for US households, with tens of thousands of people losing their homes in the aftermath of the bubble. It appears that a historic retrenchment has taken place with regard to mortgage debt, which is a new development for the USA in the post-war years.[9]

5. Concluding remarks

The empirical material and the analysis presented in the preceding sections allow for a preliminary judgement regarding the likely direction of financialisation in the USA as well as for some significant conclusions. The trajectory of the main indicators of financialisation in the USA at the aggregate level is reminiscent of Crotty (2008, p. 182) who, on the eve of the Great Recession and after stating that "a systemic crisis could

possibly erupt in the intermediate run", remarked that the "current Golden Age of finance may end with a whimper, or … it could go out with a bang."

There is good reason to think that Crotty was right about the "Golden Age of finance". This is not to imply that the US financial system is no longer prone to bubbles and excess as a mere glance at the Stock Market in 2017 would indicate. Even so, the evolution of the main macroeconomic indicators of financialisation since the Great Recession has been considerably different compared to the previous recoveries of the last four decades. The implications are likely to be weighty for the trajectory of financialisation.

The US economy remains financialised and no dramatic changes can be discerned in the conduct of its non-financial enterprises. However, financial profits have stagnated and the exposure of households to formal finance for mortgages has weakened significantly. The future path of financialisation in the USA will depend crucially on government policy decisions, including in relation to households. Nearly a decade after the crisis of 2007-9, the US financial sector is heavily dependent on the state as provider of liquidity, based on monopoly control over the means of payment. At the same time, state indebtedness has increased substantially, reflecting the closer intertwining between the state and the financial sector.

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. Furthermore, it is conceivable that

the Federal Reserve will start raising interesting rates in a sustained fashion, even if the risks of this action are manifest in view of the rising consumer debt and the tremendous increase in government debt. In sum, the future trajectory of financialisation is likely to depend on government policies, but the scope for policy making is narrow. A financialised economy characterised by stagnant financial profits that continues to drift in the long term is also a latent possibility.

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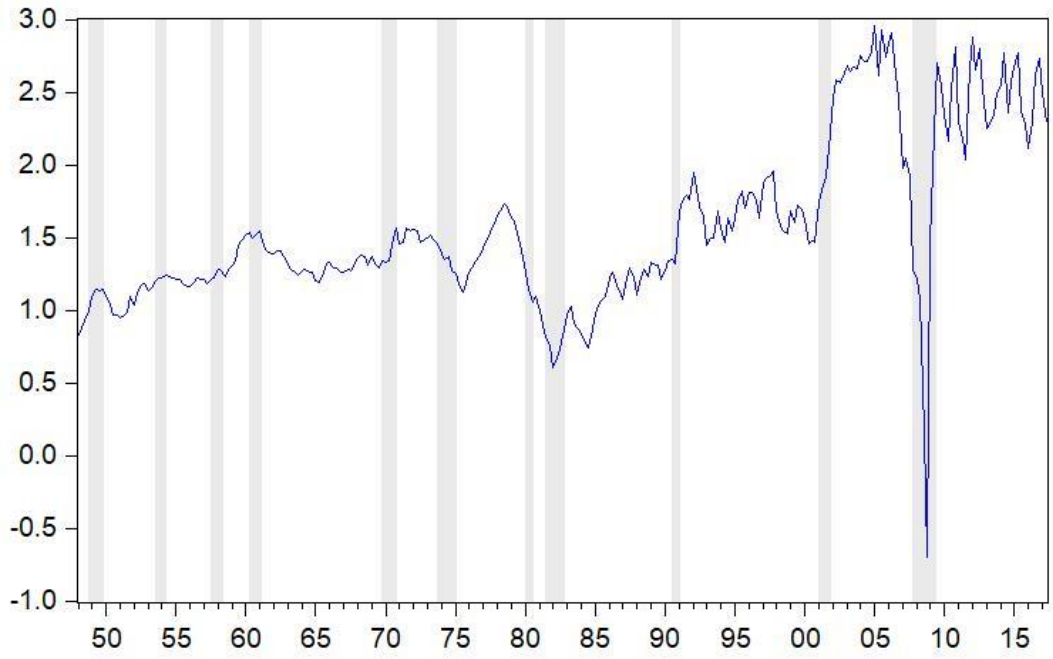
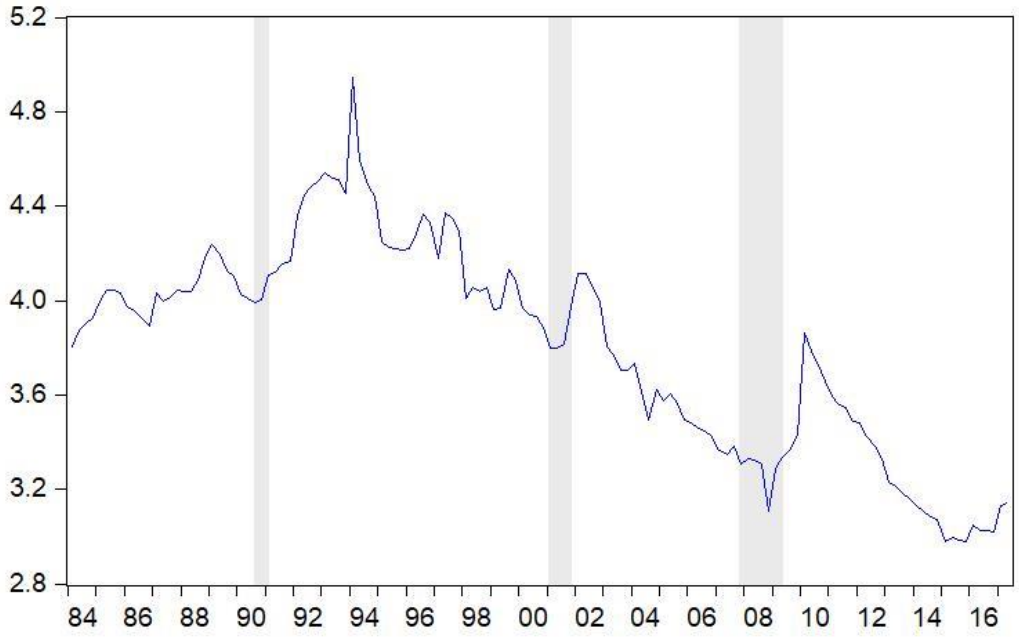
Figure 1. USA, 1948Q1-2017Q2 (quarterly data). Financial profits as percentage of GDP



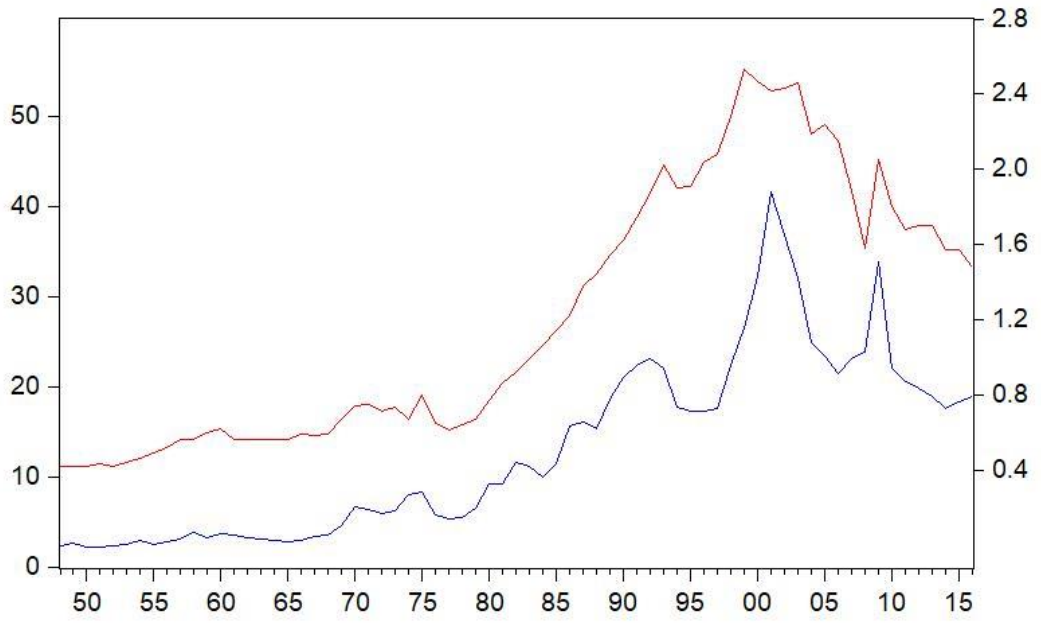
Source: Own elaboration using data obtained from the National Income and Product Accounts (NIPA) and the Federal Reserve Bank of St. Louis (FRED). [Financial profits: NIPA, Table 6.16. Corporate Profits by Industry; Nominal GDP: FRED, GDP series]. Shaded areas indicate periods of U.S. recession as determined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

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



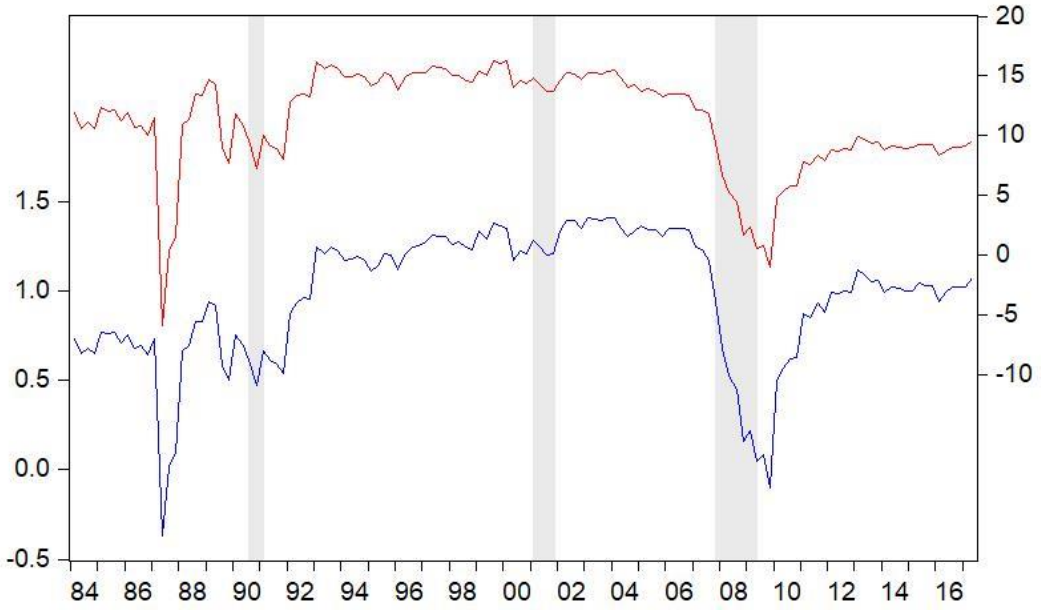
Source: Data obtained from the Federal Reserve Bank of St. Louis (FRED). [Series: USNIM]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

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



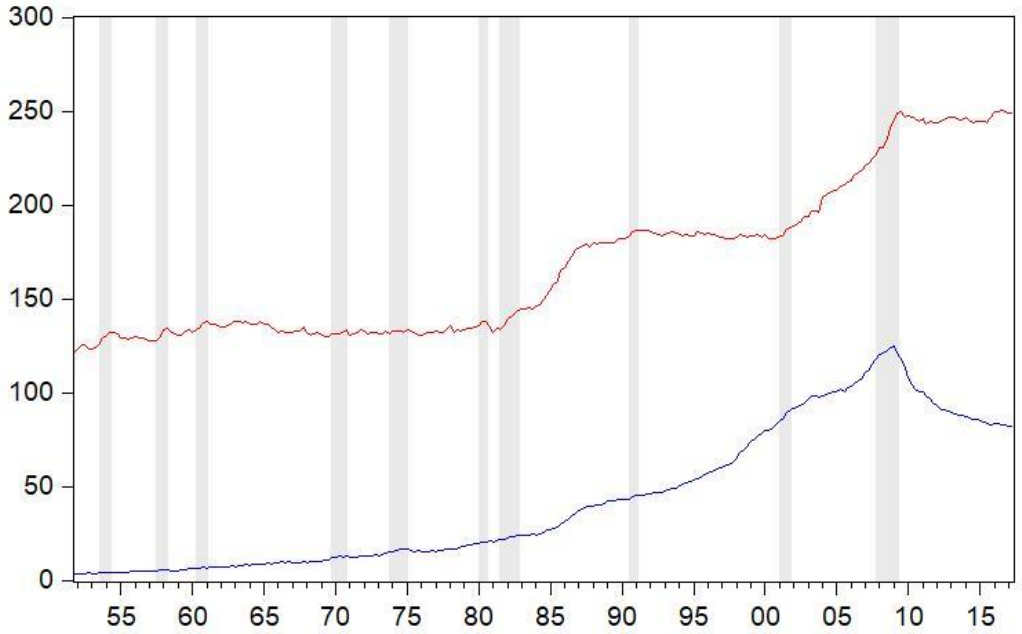
Source: Own elaboration using data obtained from the Federal Deposit Insurance Corporation (FDIC) and from the National Income and Product Accounts (NIPA). [Non-interest income for commercial banks: FDIC, Table CB04. Net Income for all Insured Commercial Banks; Total assets for commercial banks: FDIC, 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 (blue line, left axis) and return on average equity (red line, right axis) for all banks



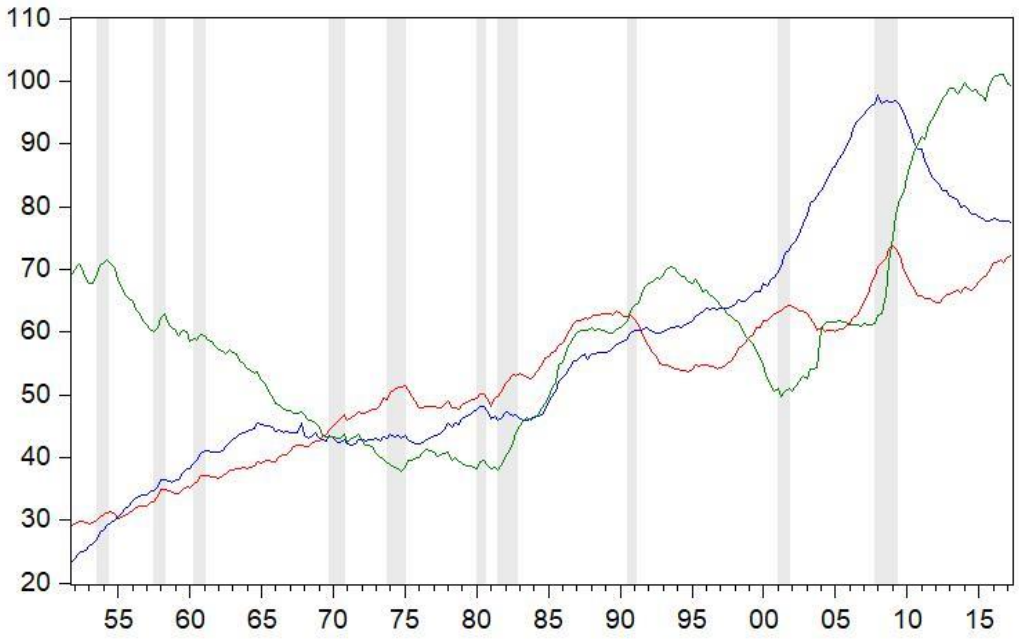
Source: Data retrieved from the Federal Reserve Bank of St. Louis (FRED). [Return on average assets: FRED, USROA series; Return on average equity: FRED, USROE series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

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



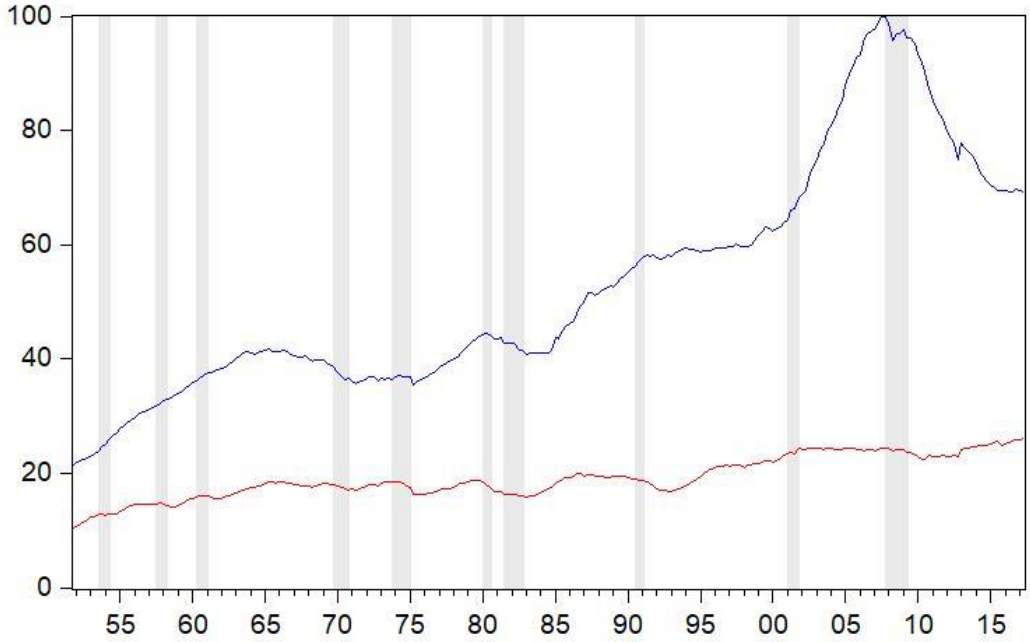
Source: Own elaboration using data obtained from the Federal Reserve Board of Governors (FRB) and from the Federal Reserve Bank of St. Louis (FRED). [Financial sector debt: FRB, Table D.3. Debt Outstanding by Sector, LA794104005 series; Non-financial sector debt: FRB, Table D.3. Debt Outstanding by Sector, 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 (blue line), non-financial business debt as percentage of GDP (red line), and federal, state and local governments debt as percentage of GDP (green 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). [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 (blue line) and consumer credit as percentage of disposable personal income (red 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, DSPI series]. Shaded areas indicate periods of U.S. recession as determined by the National Bureau of Economic Research (NBER).

Table 1. Endogenous structural break tests[a]			
Variables	Number of determined breaks	Break dates[b]	Scaled *F*-statistics
Financial profits as percentage of GDP (Figure 1)	2	1963Q1 2007Q1	112.59* 23.60*
Net interest margin (Figure 2)	3	1992Q2 2001Q4 2010Q1	61.48* 62.23* 48.28*
Non-interest income as percentage of non-financial corporate profits (Figure 3)	3	1969 1986 2000	49.14* 32.16* 54.48*
Non-interest income as percentage of total assets (Figure 3)	3	1977 1991 2004	24.83* 466.97* 135.08*
Return on assets (Figure 4)	3	1993Q1 2000Q2 2010Q1	54.63* 39.47* 54.50*
Return on equity (Figure 4)	2	1989Q3 2008Q2	74.06* 28.46*
Financial sector debt as percentage of GDP (Figure 5)	4	1971Q2 1981Q1 1990Q4 2007Q4	1004.94* 55.57* 67.95* 28.32*
Non-financial sector debt as percentage of GDP (Figure 5)	3	1971Q3 1985Q4 2001Q3	54.69* 194.67* 166.40*
Households and non-profit organizations debt as percentage of GDP (Figure 6)	4	1964Q4 1975Q3 1985Q2 2007Q4	187.96* 483.50* 352.75* 77.88*
Non-financial business debt as percentage of GDP (Figure 6)	5	1961Q3 1972Q4 1982Q3 1994Q3 2007Q4	55.22* 50.25* 64.22* 44.96* 29.86*

Table 1 (continuation). Endogenous structural break tests[a]			
Variables	Number of determined breaks	Break dates[b]	Scaled F-statistics
Federal, state and local governments debt as percentage of GDP (Figure 6)	4	1965Q3 1981Q1 1996Q1 2007Q3	183.85* 293.55* 185.02* 93.73*
Home mortgages as percentage of disposable personal income (Figure 7)	4	1964Q1 1976Q4 1986Q3 2007Q4	142.16* 517.21* 82.58* 24.07*
Consumer credit as percentage of disposable personal income (Figure 7)	5	1964Q4 1975Q1 1985Q1 1994Q4 2007Q4	43.89* 97.77* 24.99* 26.34* 23.92*
Notes: [a]Sequential Bai-Perron test: sequential testing of $l + 1$ versus l breaks using the methods outlined by Bai (1997) and Bai and Perron (1998). We employed a trimming percentage of 15%, used the 5% significance level for the sequential testing, and allowed for error distribution heterogeneity across breaks. Regressions were carried out using heteroskedasticity and autocorrelation consistent (HAC) standard errors (Newey-West estimator). We tested for breakpoints in both intercepts and deterministic polynomial trends. The appropriate degree of the polynomial trend for each series was determined following the general-to-specific methodology starting with a cubic polynomial trend; [b]Indicates the first date of the subsequent regime according to the repartition procedure; *Denotes rejection of the null hypothesis (no breakpoints) at the 5% level of significance.			

ENDNOTES

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

[2]For a more detailed discussion of similarities and differences among heterodox approaches see Lapavitsas (2011) and Orhangazi (2011).

[3]In particular Krippner (2005), Palley (2010), and Lapavitsas (2011, 2013).

[4]The largest possible sample size has been included to construct the different series, but data restrictions have created problems for some of the indicators.

[5]Measuring 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, 2017).

[6]We considered NII as percentage of non-financial corporate profits since, following Lapavitsas and Mendieta-Muñoz (2017), NII can be represented as a proportion of total profits in the economy.

[7]The 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).

[8]Note 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.

[9]The 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.