

## **The macroeconomics of “financialisation” and the deeper origins of the world economic crisis**

**Till van Treeck**

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## **Abstract**

In recent years, the interdisciplinary literature on financialisation has become one of the most quickly developing areas in the social sciences, including (Post Keynesian) macroeconomics. We discuss the relevance of the financialisation hypothesis in a non-technical manner from a macroeconomic perspective. Our interpretation of financialisation allows one to analyse the fundamental changes that the US and other economies have undergone over the past three decades or so. In particular, it helps to understand how the US economy has turned from a “debt-led” system, combining relatively weak physical investment activity, strong consumer spending, high income inequality and increasing indebtedness of firms and private households, to a “debt-burdened” system. In light of the current world economic crisis, the Keynesian financialisation hypothesis now seems to be increasingly shared among policy makers and economists.

## **1. Introduction**

The concept of “financialisation” is very ambitious and encompassing. Just as much as other catch-phrases such as “globalisation”, “Fordism”, or “neoliberalism”, this neologism attempts to capture, in a necessarily superficial and provocative way, the essence of social, political and economic developments of a specific historical period. Even before the current financial crisis, it was widely recognised that the growing weight of finance in the US American and the world economy had become a determining characteristic of the era we live in (e.g. Krippner, 2005; Martin, 2002; Epstein, 2005). In recent years, the interdisciplinary literature on financialisation has become one of the most quickly developing areas in the social sciences, including (Keynesian) macroeconomics (see van Treeck et al., 2007, Hein and van Treeck, 2009; and van Treeck, 2009a, for surveys).

More recently, the global financial and economic crisis, which originated in the US subprime mortgage market, has raised considerable doubts about the functionality of a “financialised” economy and society also within the broader public. In one of his columns for the New York Times, Thomas L. Friedman describes the era preceding the current crisis as “a long period in which too many people were making money from money, or money from flipping houses or hamburgers, and too few people were making money by making new stuff, with hard-earned science, math and engineering skills” (New York Times, 11 January 2009, p. 10).

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\* I would like to thank Eckhard Hein, Simon Sturn and Achim Truger for helpful comments. All errors are mine.

In a similar vein, Frank Rich notes: “Feckless as it was for Bush to ask Americans to go shopping after 9/11, we all too enthusiastically followed his lead, whether we were wealthy, working-class or in between. We spent a decade feasting on easy money, don’t-pay-as-you-go consumerism and a metastasizing celebrity culture.” (New York Times, 25 January 2009, p. 10) As these quotes suggest, the current global economic crisis may well mark the end of the era of financialisation.

In this article, we discuss the relevance of the financialisation hypothesis in a non-technical manner from a macroeconomic perspective.<sup>1</sup> In principle, one can distinguish between a “supply-side” and a “demand-side” analysis of financialisation. Historically, the call for financial deregulation has been mainly justified based on supply-side arguments. Broadly speaking, it has been argued that deregulated financial markets, rather than traditional banks, are best suited to spur product innovation and technical progress by improving corporate governance and providing diverse forms of venture capital to young and dynamic firms. Essentially, this view can be seen as an outflow of the “financial repression/liberalisation” hypothesis formulated primarily in the context of developing countries (see McKinnon, 1973; Shaw, 1973). It can also be traced back to the New Institutional Economics literature, which highlighted the importance of deregulated and innovative financial markets for disciplining managements (e.g. Manne, 1965; Jensen and Meckling, 1976; Fama, 1980). Today, however, many of the initial proponents of financial liberalisation seem to be somewhat disillusioned in light of the questionable effects of deregulated financial markets on business practices such as “short-term performance obsession” (e.g. Rappaport, 2005) and corporate scandals and “value destruction” (e.g. Jensen, 2005). The critique by Thomas Friedman quoted above also seems to be grounded in a supply-side analysis of financialisation. It raises the question of whether the concentration of human effort onto “unproductive” sectors may have negative long-run productivity effects. Precisely this possibility has been discussed, in more academic terms, by Murphy et al. (1991) within the framework of a Neoclassical model based on Lucas (1978), which incorporates the productivity effects of “rent seeking” in the financial sector:

(t)he flow of some of the most talented people in the United States today into law and financial services might then be one of the sources of our low productivity growth. When rent-seeking sectors offer the ablest people higher returns than productive sectors offer, income and growth can be much lower than possible. (Murphy et al., 1991, p. 506)

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<sup>1</sup> For somewhat more technical macroeconomic analyses of financialisation, see Hein (2009), van Treeck (2009b), and Dallery and van Treeck (2010). See also the collection of articles in van Treeck (2009c).

Although the supply-side dimension of financialisation has potentially important implications for economic growth and, more generally, human development, in the remainder of this article we focus primarily on some demand-side and distributional implications of financialisation. Certainly the most visible feature of financialisation in many countries, in light of the current economic crisis, has been the expansion of credit flowing to the personal sector thereby making possible a remarkable decoupling of individual consumption from disposable income, as observed by Frank Rich in the quote above. However, as we shall argue below, financialisation has had equally important implications for the business sector and private real investment decisions. While many contributions to the literature focus specifically on financialisation processes at the firm level (see van Treeck, 2009a), we shall explicitly discuss the potential macroeconomic outcomes of financial deregulation and shareholder value orientation.

The article proceeds in four sections. Section 2 introduces some theoretical concepts and discusses the potential effects of financialisation on private investment and consumption decisions, as well as income distribution, from a (Post) Keynesian perspective. An empirical illustration of these theoretical considerations follows in Section 3. We attempt to put the current financial crisis into the context of the overall macroeconomic development over the past decades, focusing in particular on the cases of the US and, to a lesser extent, Germany. Finally, Section 4 briefly concludes and offers some fundamental policy lessons from a Keynesian perspective.

## **2. Theoretical concepts: A (Post) Keynesian view of financialisation**

Below, we discuss in turn the potential implications of financialisation for the distribution of income and private investment and consumption decisions and how these partial effects potentially frame overall macroeconomic outcomes in terms of aggregate demand on the one hand and financial fragility on the other.

### **2.1 Financialisation and the (Post) Keynesian theory of the firm**

Keynes (1930, vol. II, p. 149), summarises his investment theory as follows:

Now, for enterprise to be active, two conditions must be fulfilled. There must be an expectation of profit; and it must be possible for enterprisers to obtain command of sufficient resources to put their projects into execution.

The canonical Post Keynesian theory of the firm is based on a very similar idea. As illustrated graphically in Figure 1, the investment decision of the individual firm will be determined by the interplay of the “expansion frontier” and the “finance frontier” as perceived by the firm. The expansion frontier is based on the idea of a growth-profit trade-off at the firm level over a wide range of the firm’s investment possibilities. The idea is that very fast growing firms experience technological and logistical inefficiencies involved with the expansion into new markets, learning costs, etc. (see Lavoie, 1992, pp. 114 et seq.). The finance frontier indicates the maximum rate of accumulation that the firm can finance with a given profit rate. In accordance with Kalecki’s (1937) “principle of increasing risk” and the notions of “liquidity constraints” and “debt effects” (e.g. Stiglitz and Weiss, 1980; Fazzari et al., 1988; Chirinko, 1993; Ndikumana, 1999), the slope of the finance frontier is affected by the firm’s leverage ratio and the profit payouts demanded by shareholders and creditors (interests, dividends, share buybacks), which determine the financial position of the firm and its ability to secure credit and issue equities. Now, as already noted by Keynes, investment will be constrained by the firm’s preference for profitability or the availability of means of finance.<sup>2</sup>

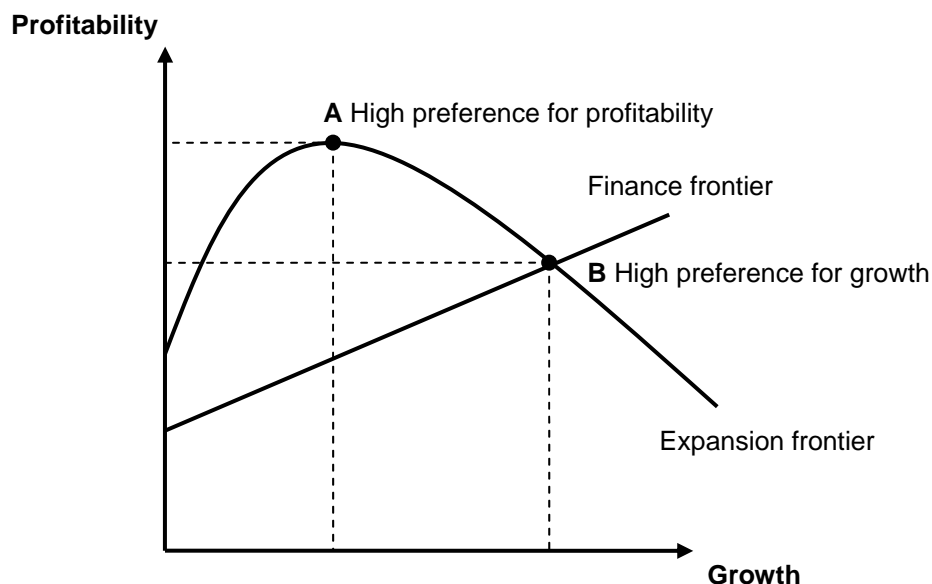
The traditional Post Keynesian theory held that firms would attempt to maximise growth and that the investment decision would be determined by the point of intersection between the expansion frontier and the finance frontier (e.g. Lavoie, 2004, p. 52; Dallery and van Treeck, 2010). The rationale behind this was the assumption that the main interest of the management (the “technostructure” in Galbraithian terms) of large corporations operating in imperfectly competitive markets was the growth of the firm, subject to only loose profitability constraints enforced by shareholders and banks (e.g. Galbraith, 1967). This view seemed to provide an accurate interpretation of corporate behaviour throughout the Fordist period following the first three decades after the Second World War. However, with financialisation and increased shareholder value orientation, one may expect two, interrelated, things to happen:

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<sup>2</sup> Note that Keynes’s exposition in the *Treatise on Money* differs somewhat from the investment theory formulated in the *General Theory*. Here, he applies a more marginalist terminology and states that “it is obvious that...the rate of investment will be pushed to the point on the investment demand-schedule where the marginal efficiency of capital in general is equal to the market rate of interest” (Keynes, 1936 [1997, pp. 136-7]). Yet, the assessment of the marginal efficiency of capital will also be subject to conflict and institutional arrangements within the firm. For instance, Keynes (1936 [1997, p. 150]) argues that in 19<sup>th</sup> century capitalism, expected profitability was not the binding constraint “for enterprise to be active”: “In former times, when enterprises were mainly owned by those who undertook them or by their friends and associates, investment depended on a sufficient supply of individuals of sanguine temperament and constructive impulses who embarked on business as a way of life, not really relying on a precise calculation of prospective profit.” By contrast, as unregulated equity markets develop in the early 20<sup>th</sup> century, “certain classes of investment are governed by the average expectation of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectations of the professional entrepreneur.” (Keynes, 1936 [1997, p. 151]) The parallels between these two distinct stages of development of capitalism and the two after-war eras, which we have called Fordism and financialisation above, seem obvious.

- Firstly, shareholders impose a higher profit payout ratio (higher dividends and lower contribution of new equity issues to the financing of investment, or share buybacks). This increases the firm's dependence on debt and can be represented graphically by an upward shift/rotation of the finance constraint.
- Secondly, managers' (firms') preference for growth is weakened as a result of remuneration schemes based on short-term profitability and financial market results. In terms of Figure 1, firms attempt to move to the left along their perceived expansion frontier.

**Figure 1:** The Post-Keynesian firm and the shareholder-manager conflict



**Source:** Dallery and van Treeck (2010).

Historically, the political objective of shareholder value orientation certainly has been to prevent “empire building” and “overinvestment” by unconstrained managements, which became a major concern of shareholders whose interests had been largely ignored by the managerial “technostructure” throughout the Fordist after-war period: “Among the manifestations of this lack of control over management were the pursuit of market share and growth at the expense of profitability [...]” (OECD, 1998, p.17). It was argued that through its effects on management behaviour, shareholder value orientation should have overall productivity enhancing effects and hence stimulate economic growth over the long run. By imposing a higher distribution rate of profits and higher leverage on firms, the “free cash flow” at the disposal of managements, and hence their capacity to “shirk” and (over)invest, should be reduced. At the

institutional level, managements should be disciplined by a liberalised capital market, in which the threat of hostile takeovers is permanent (Manne, 1965), which penalises bad but rewards good management practices (through stock market-oriented remuneration schemes such as stock options, a competitive “market for managers”, etc.), and channels savings into the most profitable investment opportunities (Fama, 1980).

A further potential effect of shareholder value orientation, particularly insofar as it is typically accompanied by labour market deregulation, is that the bargaining position of (blue collar) workers deteriorates, when the Fordist “manager-worker alliance” is replaced by a “shareholder-manager alliance” (e.g. Schulmeister, 2004; Hein and van Treeck, 2009; Dallery and van Treeck, 2010). This leads to a redistribution of income in favour of profits and management remunerations at the expense of ordinary wages. At the microeconomic level, where demand is a given, this should lead to an upward shift of the expansion frontier, because the firm can realise a higher profit rate at a given level of sales. However, at the macroeconomic level, redistribution at the expense of lower income groups can have adverse aggregate demand effects, as we shall discuss below.

## **2.2 Financialisation and private consumption**

Standard theory suggests that the following factors contribute to the explanation of aggregate personal consumption expenditure (for more details, see van Treeck, 2008, 2009b):

- the distribution of income: retained profits by firms are saved by definition, while distributed profits will be partly consumed; higher income individuals typically save a larger fraction of their income than lower income individuals;
- the propensity to consume of different income groups out of disposable income (wages and capital income, or distributed profits) and out of wealth;
- the access of different income groups to credit as well as their willingness to debt-finance consumption.

With financialisation, the following changes in the pattern of personal consumption may be expected:

- consumption will be affected positively by an increase in firms’ profit payout ratio and negatively by higher income inequality within the household sector;
- the increase in wealth, relative to income, may lead to a decrease in the personal saving rate (consumption increases relative to income);

- the deregulation of the credit market will lead to an increase of the overall propensity to consume out of income and wealth, insofar as social norms also develop towards a “debt culture”.

### 2.3 Macroeconomic outcomes of financialisation: debt-led and debt-burdened economies

The growth-profitability trade-off postulated at the firm level in section 2.1 does not simply carry over to the macroeconomic level. Here, a lower accumulation rate leads to a lower profit rate, *ceteris paribus*. This is clearly expressed in the macroeconomic profit equation stressed by Kalecki (1954, pp. 45-52) and also follows strictly from national accounting. In a closed private economy, we have

$$(1) \quad \text{Production} = \text{Investment} + \text{Consumption}$$

$$(2) \quad \text{Income} = \text{Profits} + \text{Wages}$$

and hence

$$(3) \quad \text{Profits} = \text{Investment} + \text{Consumption out of capital income} - \text{Savings out of wages}$$

In a closed private economy, profits are always exactly equal to investment plus consumption out of profits minus saving out of wages. Hence, when many firms attempt to move to the left along their individual expansion frontiers, in the absence of compensating forces they will experience a downward shift of these expansion frontiers, due to the adverse aggregate demand effect (see Cordonnier and Van de Velde, 2008; Hein and van Treeck, 2009).

However, as we shall argue below, with financialisation, there are a number of new channels allowing firms to increase profitability at the macroeconomic level despite the reduction of what is perceived as overinvestment at the firm level. These channels include an increased consumption out of distributed profits by shareholders as a result of higher dividends and share buybacks as well as the debt-financing of consumption by workers and wealth-owners facilitated by financial deregulation and a rising wealth-to-income ratio.<sup>3</sup> This then raises a number of interesting “stock-flow issues” in the sense that the interaction between investment

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<sup>3</sup> In an open economy with economic activity of the state, an external surplus and a government deficit are further sources of macroeconomic profits. See Cordonnier (2006) for an original analysis of the phenomenon “profits without investment” in the US and France.



and consumption flows on the one hand and the stocks of wealth and debt on the other hand become a crucial element in explaining overall macroeconomic developments.<sup>4</sup>

By means of illustration, Figure 2 summarises the basic stock-flow dynamics involved with two important changes that are likely to occur with financialisation, namely

- an increase in firms' propensity to distribute profits to shareholders in the form of dividends and share buybacks, and
- easier access to consumer credit for private households.

As summarised in panel a) of Figure 2, a higher distribution of profits has conflicting effects on aggregate demand (and hence profits). On the one hand, insofar as it reflects a conscious preference change in corporate strategies ("downsize and distribute" rather than "retain and invest"; Lazonick and O'Sullivan, 2000), it will be accompanied by a direct negative impact on real investment. In terms of Figure 1, as shareholders impose their preferences on managers, firms attempt to move to the left along their expansion frontier. Moreover, higher profit payouts and higher debt imply a tightening of the finance constraint (upward shift/rotation of the finance frontier in terms of Figure 1). As firms' retained earnings decline and dependence on external finance (leverage) increases, some firms may find it increasingly difficult to borrow for investment purposes. On the other hand, a higher profit payout ratio mechanically reduces the private saving rate so that aggregate demand is stimulated via personal consumption. Clearly, the importance of this effect depends on the propensity to consume of the recipients of capital income. Depending on whether the negative effects on investment or the positive effect on consumption dominates, the economy can be characterised as either "debt-led" (higher leverage on the part of firms stimulates the economy), or "debt-burdened" (higher leverage is accompanied by weak aggregate demand and/or financial distress in the form of liquidity or solvency problems in the business sector).

Similar configurations are possible as a result of easier access to credit for (low income) private households, say as a consequence of higher personal wealth and/or credit market innovations (credit cards, home equity withdrawals, collateralised debt obligations, etc.). When consumers are able to borrow more, this has an obvious and immediate positive flow effect on consumption, and hence aggregate demand. However, at the same time personal indebtedness and hence loan repayment and interest obligations will become increasingly important. This may eventually lead lenders to downgrade their assessment of the borrowers' creditworthiness, particularly when the latter are low income individuals. This will then induce borrowers to save more, thereby mitigating the initially expansionary effect of credit expansion. More-

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<sup>4</sup> See Skott and Ryoo (2008a,b), Lavoie (2008), Hein (2009), Dallery and van Treeck (2010), van Treeck (2009) for analyses of financialisation within formal stock-flow consistent models. See also Palley (1994).

over, when the recipients of interest payments and bank profits have a lower propensity to consume than borrowers, a higher debt burden of low income individuals will be associated with an increase in the personal saving rate, as income is redistributed from borrowers to lenders. Finally, an increasing debt-to-income ratio in the personal sector contributes in itself to higher financial fragility in the economy as a whole. Again, the economy can be characterised as either debt-led or debt-burdened, depending on whether or not the expansionary flow effect of debt expansion dominates the contractionary stock effect.

It is important to recognise that there is, in principle, no clear-cut criterion for whether or not and/or for how long a debt-led expansion of aggregate demand will be sustainable. It may well be the case that changes in firms' profit payout ratio, households' access to credit or some other relevant parameters trigger a permanent increase in firms' leverage ratio and/or households' debt-to-income ratio, which may be linked to either expansionary or contractionary overall effects on aggregate demand. Similarly, it may be the case that an economy is initially debt-led but eventually turns debt-burdened, say when loan repayment and interest obligations cause an increase in saving which overcompensates the initial stimulus on investment or consumption (for a more formal discussion, see van Treeck, 2009b). Similarly, fiscal, monetary and regulatory policies as well as private banking practices may support the rise in private debt ratios over a considerable period of time. For instance, expansionary monetary policies will alleviate the negative stock effect of higher debt burdens. Similarly, under conditions of an overly optimistic economic climate and long-lasting appreciations of stock market or housing prices, private financial institutions may be quite keen to support a prolonged expansion of credit flowing to the private sector which would otherwise seem unreasonable.

Yet, while it may be difficult to determine clear-cut theoretical criteria for the sustainability of debt-led expansions, from a more practical point of view the analysis of stock-flow relations can be very helpful in uncovering potential macroeconomic risks associated with financial market developments. Precisely this position has been taken, over the past ten years or so, by the macroeconomic research group at the Levy Economics Institute led by Wynne Godley, starting with Godley (1999). The starting point of their Strategic Analyses is the well known accounting identity according to which the financial balances of the three main sectors in the economy necessarily sum up to zero:

$$(4) \quad \text{Private financial balance} + \text{Government financial balance} + \text{Foreign financial balance} = 0.$$

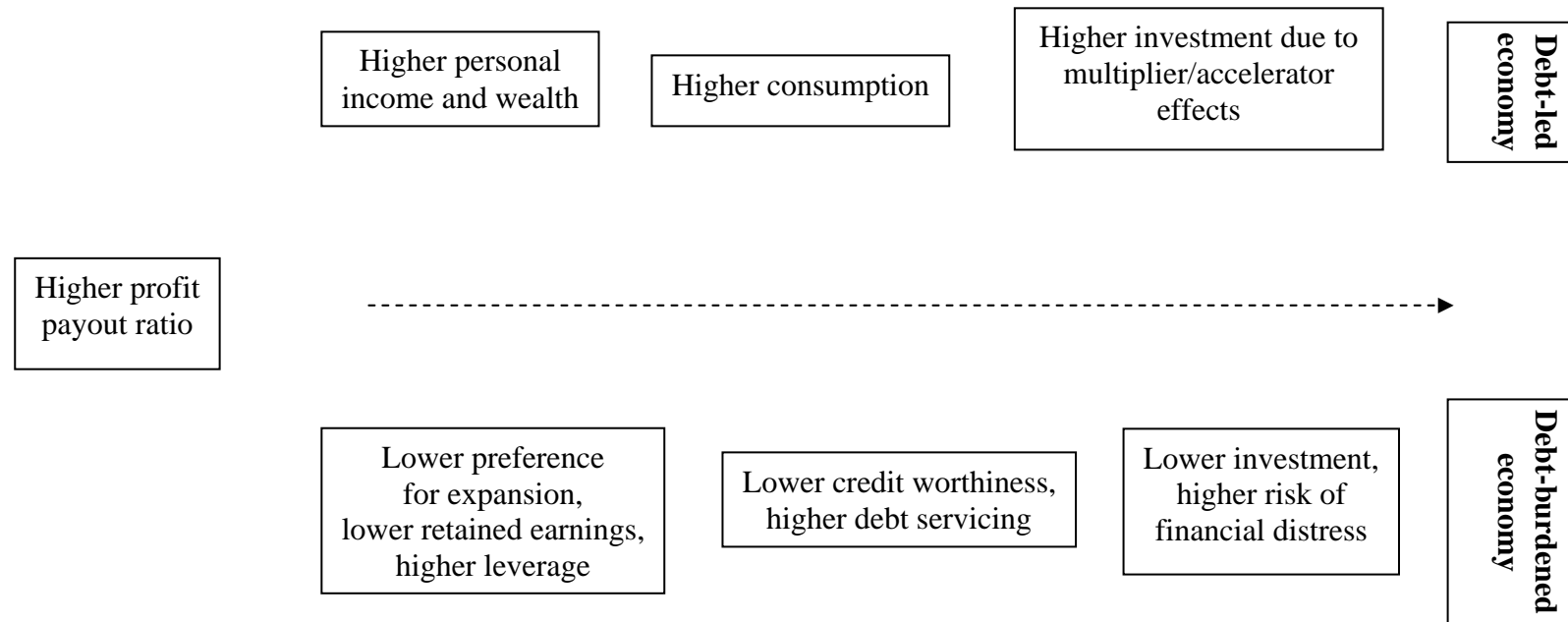
Starting from this flow identity, macroeconomic risks and financial fragility can result from the potentially unsustainable accumulation of debt within one or more sectors in the economy:

As there is a limit to the extent to which stocks of debt can be allowed to rise relative to GDP, there is a corresponding limit to the extent to which the financial balances can (be allowed to) fluctuate, implying that the ratios of stocks to GDP have *norms* that can sometimes be used to evaluate strategic options. (Godley et al., 2007, p. 2)

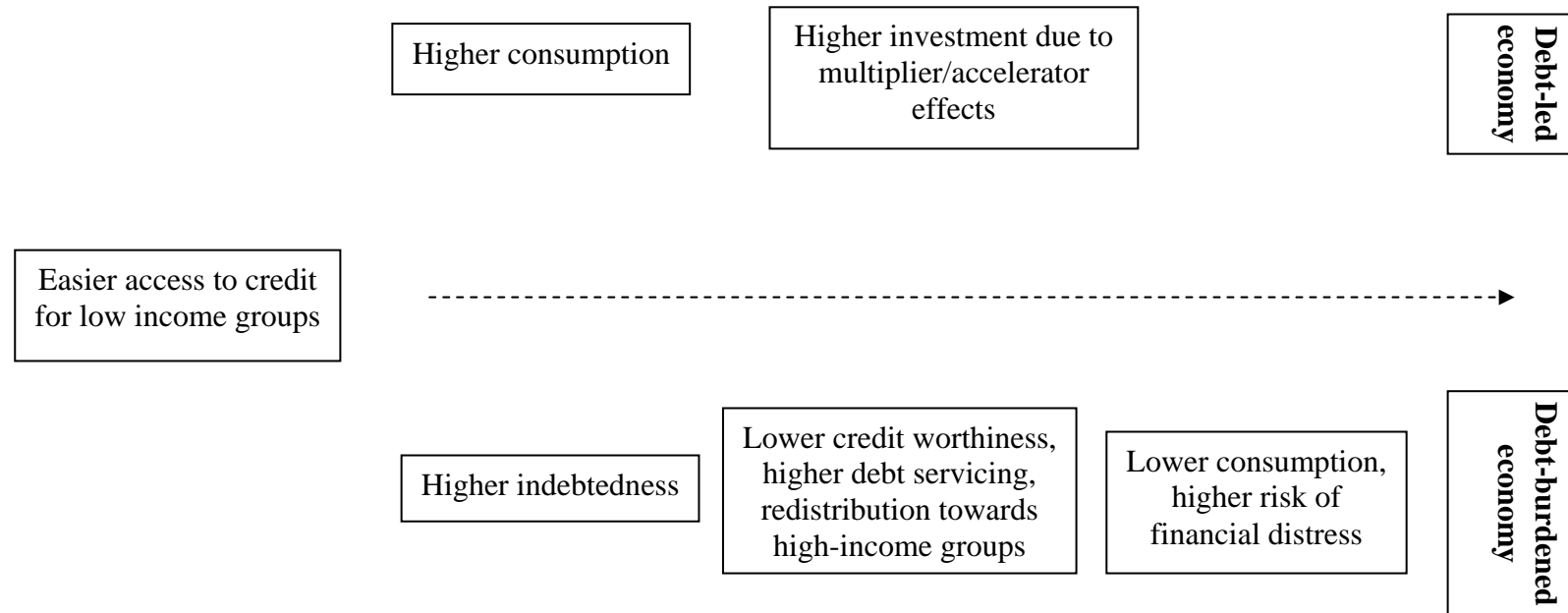
In the next section, we shall argue that financialisation in the US contributed to substantial increases in personal and corporate debt ratios which eventually turned out to be unsustainable. We shall also discuss the interactions of these developments in the US private sector with the financial position of the US government and global financial imbalances.

**Figure 2:** Debt-led and debt-burdened economies

**a)** Higher profit payout ratio of firms



**b) Easier access to personal credit**



### **3. Empirical illustration: financialisation and the current financial crisis**

#### **3.1 Financialisation in the US**

Figures 3-8 give a good first impression of macroeconomic trends in the US since the 1960s (see van Treeck et al., 2007, for a more detailed analysis). In particular, they suggest that “something” seems to have changed in the underlying structure of the US economy in the early 1980s.

Until the early 1980s:

- income inequality was relatively low and roughly stable;
- the personal net worth-to-income ratio was relatively stable or slightly decreasing;
- the personal saving rate was relatively high and slightly increasing;
- the personal debt-to-income ratio was relatively low and roughly stable;
- non-financial corporations retained a large and roughly stable fraction of their net profits;
- the growth rate of net capital stock displayed cyclical movements around a relatively high trend;
- the contribution of net new equity issues to the financing of fixed capital investment by non-financial corporations was small but positive;
- firms’ debt-to-capital ratio was relatively low.

By contrast, since the early 1980s:

- income inequality has drastically increased (to levels comparable to the 1920s);<sup>5</sup>
- the personal net worth-to-income ratio has strongly increased;
- the personal saving rate has drastically declined (and recently reached negative territory for the first time since the early 1930s);
- the personal debt-to-income ratio has drastically increased;
- non-financial corporations have heavily increased the dividend payout ratio (the ratio of distributed profits to net profits after tax and interest payments);<sup>6</sup>
- the growth rate of net capital stock has shown an overall declining trend (with the important exception of the “New Economy” boom of the late 1990s);

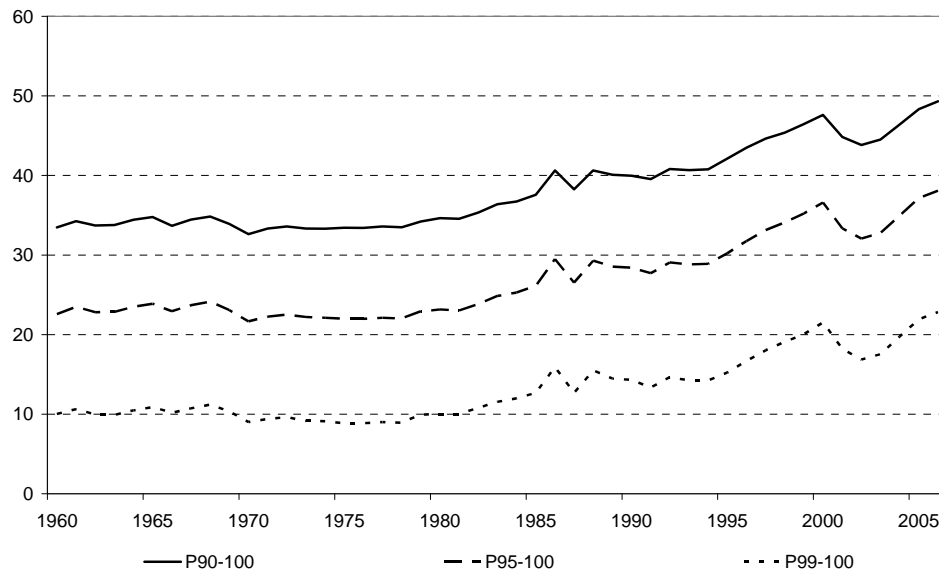
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<sup>5</sup> The evolution of income inequality is hardly affected when capital gains are excluded (see Piketty and Saez: Piketty and Saez: <http://elsa.berkeley.edu/~saez/>).

<sup>6</sup> It has been argued that for the business sector as a whole, the importance of dividend payments as a means to distribute profits to shareholders has declined relative to share buybacks (Fama and French, 2002) and that the aggregate decline in the retention ratio can be attributed to the dividend decisions of the largest firms (von Eije and Megginson, 2008).

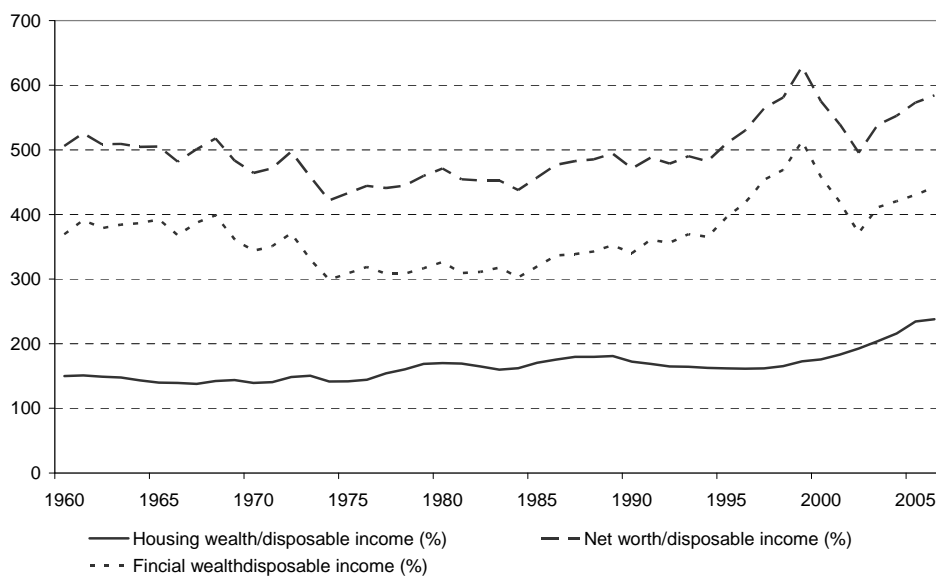
- the contribution of net new equity issues to the financing of fixed capital investment by non-financial corporations has become negative and very large in absolute value;
- firms' debt-to-capital ratio has increased.

**Figure 3:** Top fractiles' income shares (including capital gains) (%), USA, since 1960



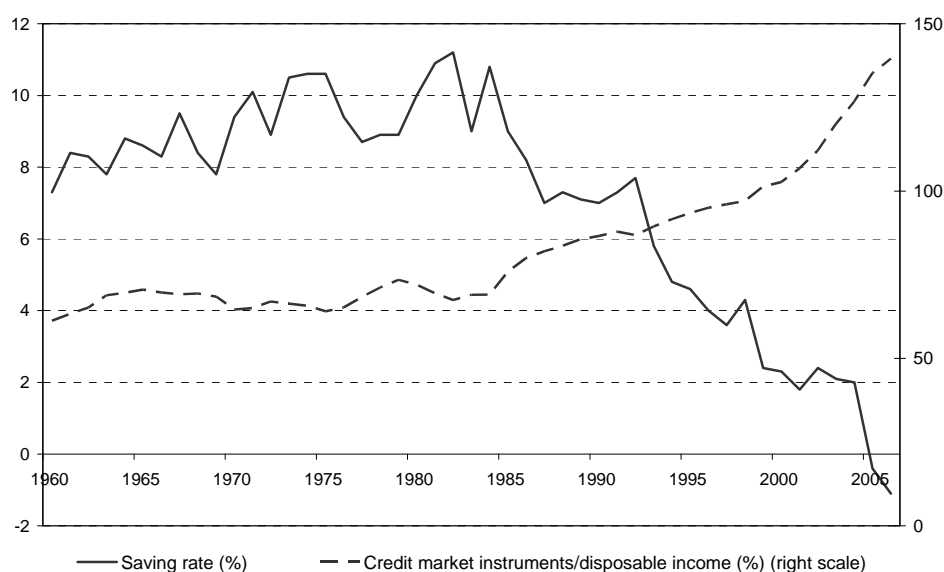
**Source:** Piketty and Saez: <http://elsa.berkeley.edu/~saez/>; author's calculations.

**Figure 4:** Personal wealth relative to income, USA, since 1960



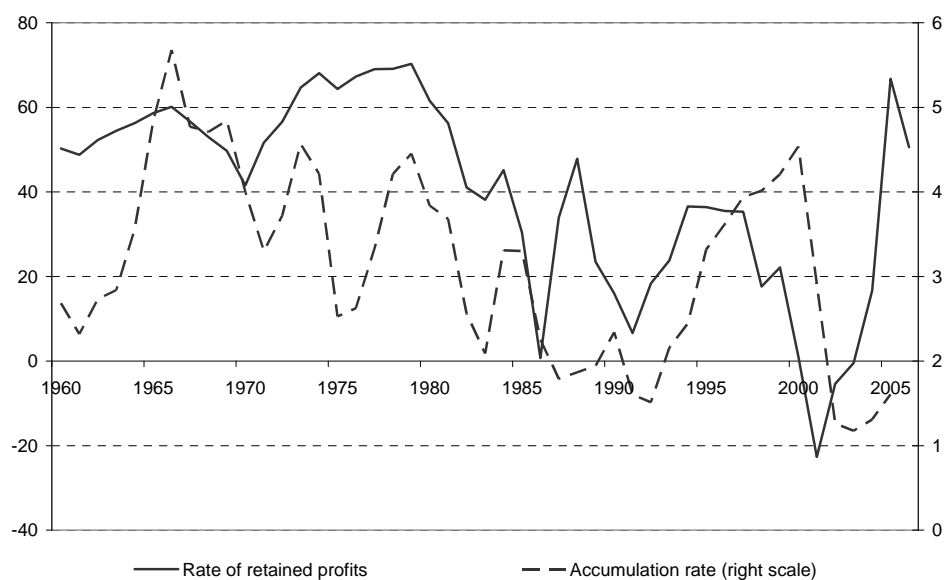
**Source:** Flow of Funds; author's calculations.

**Figure 5:** Personal saving rate and debt-to-income ratio, USA, since 1960



**Source:** NIPA, Flow of Funds; author's calculations.

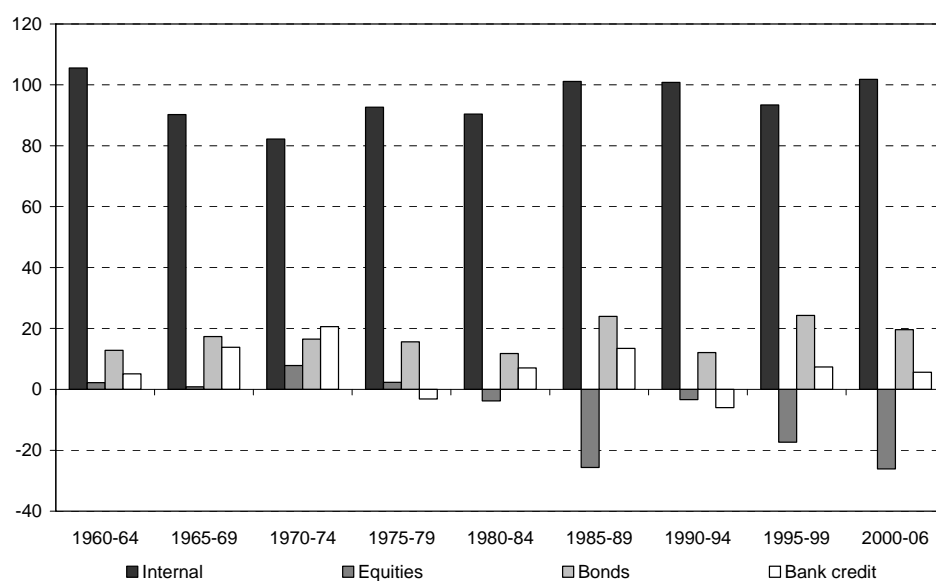
**Figure 6:** Rate of retained profits and growth rate of net capital stock (%), non-financial corporations, USA, since 1960



**Source:** NIPA, Fixed Asset Tables; author's calculations.

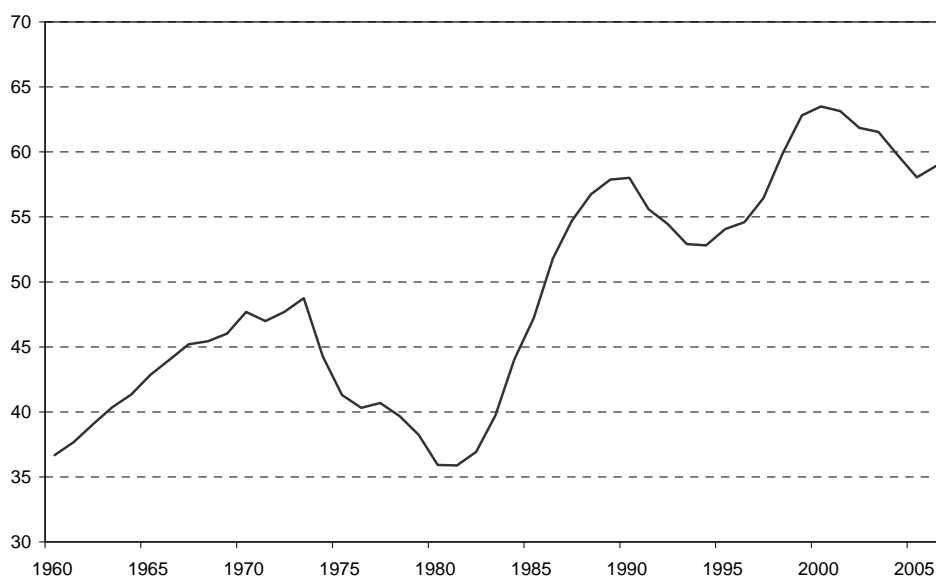


**Figure 7:** Financing of investment, non-financial corporations, USA, since 1960



**Source:** van Treeck et al. (2007) on the basis of Flow of Funds.

**Figure 8:** Debt-to-capital ratio, non-financial corporations, USA, since 1960



**Source:** van Treeck et al. (2007) on the basis of Flow of Funds.

At least before the outbreak of the current financial crisis, the aforementioned stylised facts were, of course, interpreted in very different ways. Put very crudely, from the point of view of mainstream macroeconomics, it was typically argued that:

- the increase in income inequality over the past decades was due to a skill bias in technological change, which has increased the gap between the marginal productivity of high skilled and low skilled labour; moreover, globalisation has made unskilled labour relatively more abundant, while high skilled labour and capital have become relatively scarcer, and hence more expensive;
- wealth has increased relative to income because expectations of future profits and productivity gains have developed favourably;
- the personal saving rate has declined because households' permanent income has increased and households have been able, supported by financial deregulation and innovation, to borrow against their higher wealth and income expectations;
- shareholder value orientation has led firms to reduce inefficient overinvestment ("empire building") and to distribute "excess cash flow" to shareholders in the form of dividends and share buybacks; the decrease in the growth rate of the domestic net capital stock is also linked to the fact that companies can now invest and benefit from comparative advantages of different countries on a global scale;
- firms have increasingly engaged in hostile takeovers (leveraged buyouts); the threat of hostile takeovers and higher debt burdens have disciplined management and made corporate governance more efficient; this has made the US economy increasingly attractive also for foreign capital, which has further contributed to the appreciation of asset prices and to the increase in domestic personal wealth.

By contrast, on the basis of the (Post) Keynesian financialisation hypothesis, which now seems to be increasingly shared among policy makers and economists, one may rather argue that:

- the increase in income inequality over the past decades is due to a change in power relations between shareholders, managers and blue collar workers, induced by political decisions such as the deregulation of financial and labour markets, the weakening of trade unions, tax policies favourable to high income households, etc;<sup>7</sup>

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<sup>7</sup> In his recent popular book, Nobel laureate Paul Krugman (2008, pp. 7-8) admits that he had been a long-time believer in the conventional "story" according to which "impersonal forces such as technological change and globalization cause America's income distribution to become increasingly unequal", before recognising that "political change in the form of rising polarization has been a major cause of rising inequality. ... The empowerment of the hard right

- higher profit expectations linked to the redistribution of income have also contributed to the increase in wealth; the latter has also been actively supported by firms buying back their own shares;
- the personal saving rate has declined because social norms have become increasingly consumerist and even very high income groups have very low saving rates; many lower income households have reacted to stagnating real incomes by taking on debt in order to “keep up with the Joneses”; this process has been facilitated by financial deregulation and predatory lending and led to increasing “financial fragility”, as uncovered by the current financial crisis;<sup>8</sup>
- shareholder value orientation has effectively led to “short-term performance obsession”<sup>9</sup>: firms have abstained from potentially “value-creating” investment projects because they fear strong stock market reactions in case of small misses in conventional quarterly earnings targets; fixed investment has also been “crowded out” by financial investment and excessive share buybacks and dividend payouts have created liquidity constraints and vulnerable balance sheets on the part of many banks and non-financial firms, adding to overall “financial fragility”;
- US capital imports have been used primarily for personal consumption purposes rather than for enhancing technological progress and productivity gains through fixed capital investment; the de-industrialisation of the US economy threatens international competitiveness and creates doubts regarding the sustainability of the US external deficit.

Based on our theoretical considerations in the previous section, it can be argued that the US economy has been essentially “debt-led” during much of the past decades. Especially since the second half of the 1980s, both private households and corporations have increased their debt ratios considerably. For the business sector, this was partly the result of the hostile takeover movement of the 1980s and of important equity repurchases. While firms had previously borrowed to close the financing gap between internal means of finance and real investment expenditure, they now increasingly used credit to make financial investments. This contributed to the rise in per-

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emboldened business to launch an all-out attack on the union movement, drastically reducing workers’ bargaining power; freed business executives from the political and social constraints that had previously placed limits in runaway executive paychecks; sharply reduced tax rates on high incomes; and in a variety of other ways promoted rising inequality.”

<sup>8</sup> See van Treeck (2008) for an empirical analysis of US consumer behaviour.

<sup>9</sup> This is essentially the complaint by Rappaport (2005), one of the main early proponents of shareholder value (Rappaport, 1986).

sonal financial wealth and capital income, which in turn boosted private consumption. Interestingly, the highest income groups in the US seem to have reduced their saving rate considerably during the New Economy boom of the 1990s, indicating the importance of the so-called wealth effect on consumption in the US (Maki and Palumbo, 2001). At the same time, lower income households had increasingly easy access to credit, which allowed them, up to a point, to expand consumption expenditures despite the stagnation of their real incomes. This led to a remarkably robust expansion of aggregate demand (and hence profits) despite the very volatile and often rather sluggish private real investment activity. As Sapir (2009, p. 29) puts it:<sup>10</sup>

The US economy maintained a high rate of growth by substituting credit – mostly mortgage credit and the now notorious home equity extraction mechanism – for labor income. This was helped by a highly pro-active monetary policy but also by securitization.

When the New Economy stock market bubble burst in 2001, the housing market boom almost immediately “took over” and allowed for a further decline in the personal saving rate. This development was supported by government policies in a number of significant ways. Firstly, financial deregulation, starting in the 1970s and culminating in, amongst other things, the repeal of the Glass-Steagall Act from 1933 in 1999, as well as accommodating interest rate policies have supported the expansion of credit flowing to the personal sector (Chancellor, 2005; Kuttner, 2007). Moreover, the “government-sponsored enterprises” Fannie Mae and Freddie Mac have directly contributed to the housing market boom of the early 2000s by supporting access to mortgages (up to 70 per cent of all mortgages in some years, according to Bloomberg, 6 September 2007). Additionally, private spending on consumption and housing was supported by large multi-year tax cuts and interest rate cuts immediately after the burst of the New Economy-bubble in 2000 (Parienteau, 2006). Yet, when housing prices eventually stopped increasing, a severe economic downturn and financial crisis became inevitable, as the economy turned “debt-burdened”.<sup>11</sup>

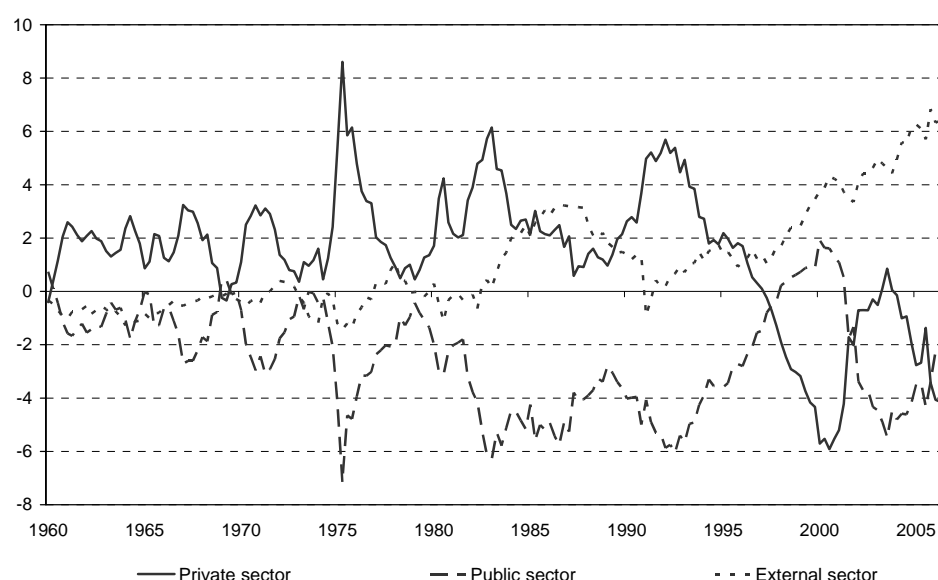
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<sup>10</sup> See also Horn et al. (2009) for a more detailed analysis of the link between rising income inequality, macroeconomic imbalances and financial instability in the US.

<sup>11</sup> In an early contribution, Godley (1999) predicted the in his view inevitable “day of reckoning” for the US economy rather accurately: “Bubbles and booms often continue much longer than anyone can believe possible and there could well be a further year or more of robust expansion. The perspective taken here is strategic in the sense that it is only concerned with developments over the next 5 to 15 years as a whole.” (p. 2) “The central contention of this paper is that, given unchanged fiscal policy and accepting the consensus forecast for growth in the rest of the world, continued expansion of the U.S. economy requires that private expenditure continues to rise relative to income. Yet while anything can happen over the next year or so, it seems impossible that this source of growth can be forthcoming on a strategic time horizon. The growth in net lending to the private sector and the growth in the growth rate of

The one-sided dependence of US growth on private consumption had important implications for the financial balances referred to above. As shown in Figure 9, the private financial balance started deteriorating in the early 1990s and even turned negative in the late 1990s. While in the late 1990s private investment contributed importantly to economic expansion, since the early 2000s the renewed deterioration in the private financial balance can be attributed almost entirely to the household sector. The contribution of private non-residential investment to economic growth was negligible during this period. At the same time, aggregate demand was strongly supported by a very expansionary fiscal policy stance. An important implication of this was the constant degradation of the US external balance.

**Figure 9:** Financial balances as a share of nominal GDP, USA, since 1960



**Source:** van Treeck et al. (2007) on the basis of NIPA.

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the real money supply cannot continue for an extended period. Moreover, if, per impossibile, the growth in net lending and the growth in money supply growth were to continue for another eight years, the implied indebtedness of the private sector would then be so extremely large that a sensational day of reckoning could then be at hand.” (p. 10)

### 3.2 Financialisation and the world economy

The accounting flipside of the growing US deficit is that in several other countries the sum of the private and government financial balances has substantially increased over the past decades. Table 1 illustrates this process of increasing “global imbalances”.

Accounting identities do not say anything about economic causalities. While we have highlighted the domestic driving forces behind the structurally negative financial balances of the US private and public sectors, some economists have put the US external deficit down to a global “saving glut” (e.g. Bernanke, 2005). In our view, there is some truth in both these views, and there seems to be some link between financialisation at the international level and the massive external surpluses particularly of developing countries. As Table 1 shows, especially emerging economies in Asia and Latin America turned from net importers of capital in the mid-1990s to net exporters in the mid-2000s. When these economies were hit by the consecutive financial and currency crises in the 1990s, the concomitant capital outflows were in large part directed to the US, where they contributed to the New Economy boom by supporting the rise in stock prices and offering attractive borrowing opportunities to the US private and public sectors. The continuing efforts of these emerging economies to accumulate foreign currency reserves (“war chests”) can partly be understood as a pre-emptive measure against potential future currency crises (e.g. Bernanke, 2005).

**Table 1:** Trade balances of selected countries, in billions of US Dollars, 1996-2006

	1996	2000	2006
USA	-124.8	-415.2	-877.6
UK	-10.5	-37.4	-55.6
Spain	-1.4	-23.0	-107.0
Germany	-13.8	-33.9	116.8
Japan	65.1	118.7	164.9
China (without Hong Kong)	7.2	20.5	211.3
‘Dynamic Asia’*	-8.1	61.2	116.8
Central and South America	-36.1	-28.3	45.3
Middle East/Africa	1.3	79.3	280.0
Central and Eastern Europe	-0.3	42.4	69.6

\*Taiwan, Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Thailand.

**Source:** OECD Economic Outlook No. 80.

Other important exporters of capital were developed economies with weak internal growth dynamics, such as Germany or Japan, where no significant wealth effect on consumption operated, domestic demand was weak and export surpluses were the only significant driver of GDP growth. As an illustration, we discuss the case of Germany in some greater depth below.<sup>12</sup>

Germany has traditionally been considered as a typical example of a “coordinated market economy” (e.g. Hall and Gingerich, 2004). However, while Germany’s labour market was indeed seen, in the past, as highly regulated and the financial system characterised as “bank-based”, financialisation has brought about substantial changes also in this country, at least since the mid- or late 1990s.

As a reflection of this, equity repurchases have become increasingly important since the late 1990s. Referring to the euro area, the European Central Bank notes that “firms that have undertaken share buybacks over the past few years have, on average, invested less than firms not undertaking any share buybacks” (ECB, 2007: 103), although it argues that the direction of causality is unclear. In this context, it is important to note that share buybacks had been completely banned in Germany prior to 1998 (as a consequence of the financial crisis of 1931). Also, the 2002 taxation reform abolished the previously very important tax on capital gains from equity sales for corporations so that the risk of hostile takeovers has considerably increased. Partly as a result of these two important reforms, shareholder value orientation and high stock prices have become a major objective of managements (ECB, 2007: 110), potentially at the expense of physical investment, which was very weak in recent times. As Box 1 shows, there has been a whole range of further reforms aiming at the deregulation of the financial system. This has been accompanied by the deregulation of the labour market, in particular since the early 2000s. The replacement rate and duration of unemployment benefits have been significantly reduced, the degree of wage bargaining coordination has declined together with trade union power, and temporary employment contracts as well as wage dispersion are heavily on the rise (e.g. Hein and Truger, 2005; Bellmann and Kuehl, 2007; Schettkat, 2006; Dustmann et al., 2007).

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<sup>12</sup> The discussion below is based on van Treeck et al. (2007) and van Treeck (2009a). See also Horn et al. (2009) for a more detailed analysis of the link between rising income inequality, macroeconomic imbalances and financial instability in Germany.

**Box 1:** Financial deregulation in Germany – some landmarks

**1991:** Tax on stock market transactions abolished

**1997:** Wealth tax abolished

**1998:** Legalisation of share buybacks and stock options

**2000, 2008:** Reduction of corporation tax (from 40% to 25% and then 15%) and of capital income taxes

**2001:** “Riester-Rente”: public subsidies for private old age pension schemes

**2002:** Tax on realised capital gains abolished for corporations and reduced for private households (from respectively 40% and up to 53% previously)

**since 2003:** Fiscal and regulatory support for credit securitisation market (“True Sale Initiative”)

**2004:** Legalisation of Hedge Funds, legalisation of derivative trading and leveraging for Investment Funds

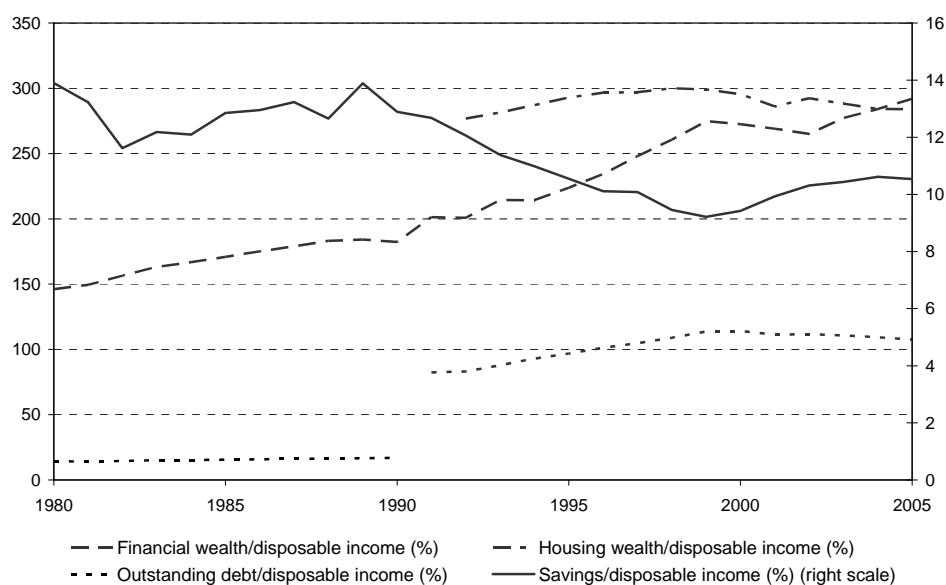
**2007:** Legalisation of REITs, excluded from corporation tax

**2008:** Tax reliefs for Private Equity Funds

However, this apparent process of convergence to the US (or Anglo-Saxon) financialisation model has taken place in a very different macroeconomic environment. As for households’ consumption behaviour, we observe that the personal net saving rate is substantially higher in Germany than in the US (Figure 10). After fluctuating around 12 to 14 per cent from the 1960s to the early 1990s, the personal saving rate has decreased somewhat during the (modest) boom of the late 1990s, only to start increasing again in the early 2000s. Beyond the general influence of consumption norms, this seems in part due to the widespread feeling of insecurity caused in particular by the deregulation of the labour market and the partial privatisation of the pension system (Klär and Slacalek, 2006). Also, income inequality is massively on the rise (e.g. Bach and Steiner, 2007; OECD, 2008). Higher income groups have very high saving rates in Germany (Figure 11). Econometric studies suggest that the propensity to consume out of wealth has so far been very weak (e.g. Boone et al., 1998; Altissimo et al., 2005). As can be seen from Figure 10, financial wealth relative to disposable income has risen substantially, while personal debt relative to income has stagnated, despite financial deregulation. Apparently, low and middle income groups have not compensated their stagnating real incomes by increasingly debt-financing their consumption expenditures.



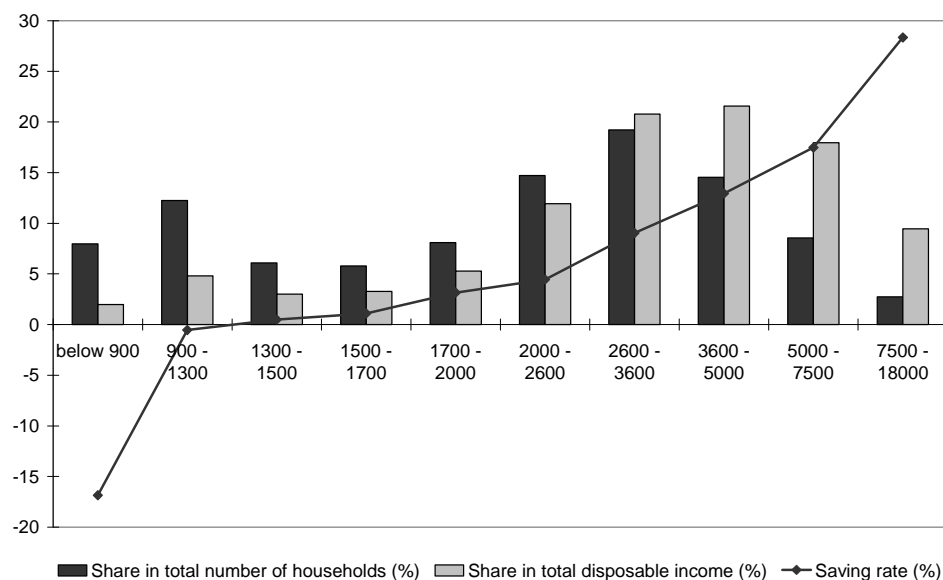
**Figure 10:** Personal wealth and debt relative to disposable income and net personal saving rate, Germany, since 1980



*Note: Household sector includes personal firms since 1991.*

**Source:** van Treeck et al. (2007) on the basis of Flow of Funds.

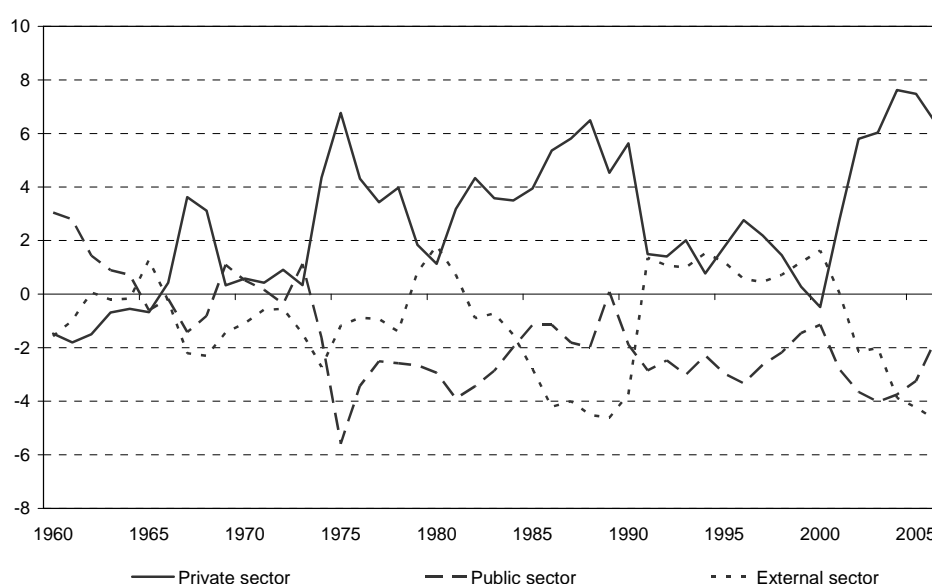
**Figure 11:** Net saving rate, private households (income fractiles, in Euros), Germany, 2003



**Source:** van Treeck et al. (2007) on the basis of EVS 2003.

As aggregate demand, and hence profits, were only weakly supported by private investment and consumption, economic growth in Germany has been generally tepid and one-sidedly dependent on the external surplus (Table 1, Figure 12). While Germany's export performance can partly be attributed to the, by international comparison, exceptional wage restraint over the past years, the financial side of the foreign account surplus is that personal savings (by upper-class households) were too large to be absorbed by the business and public sectors. As investment spending was weak, and the public sector unwilling or, constrained by the Maastricht regime, unable to play a similarly active role in sustaining aggregate demand as the US government, excess private savings were exported to the rest of the world in order to finance German export surpluses (Hein and Truger, 2005, 2007). As a result of the large relative contribution of net exports to economic growth, an economic downturn abroad has immediate repercussions on the German economy via the export channel. Simultaneously, as German financial institutions, constrained domestically by weak credit demand of both the business and the household sector, are strongly oriented towards financial investments abroad (SVR, 2007, ch. 3), they are particularly subject to the risk of contagion in case of a financial crisis abroad. This partly explains why German banks have been particularly hit by the current US subprime mortgage crisis (SVR, 2007, ch. 3).

**Figure 12:** Financial balances as a share of nominal GDP, Germany, since 1960



**Source:** van Treeck et al. (2007) on the basis of National Accounts.

## 4. Conclusions

The preceding analysis suggests that financialisation has contributed to considerable macroeconomic risks and to increasing inequality. In the US, economic growth has been supported for a long time by a rapid increase in private debt, which has temporarily compensated the depressive effect of shareholder value orientation and stagnating real mass incomes on aggregate demand. This debt-led expansion has turned out to be unsustainable. At the international level, developing countries as well as rich countries with weak internal demand (such as Germany or Japan) have increasingly exported capital to rich countries with debt-led economies (such as the US, the UK, or Spain). As these economies turned debt-burdened, a global economic crisis became inevitable.

This crisis invites both economists and policy makers to reconsider the foundations of economic policy. The idea of a “New New Deal” becomes increasingly popular (e.g. Krugman, 2008). In the US, the new president Barack Obama explicitly refers to Franklin D. Roosevelt’s New Deal policies when describing the challenges that lie ahead the US and global economies. Very broadly speaking, in our view a more functional macroeconomic growth regime would have to combine the following basic elements:

- a stricter regulation of financial markets preventing short-term performance obsession on the part of private firms and excessive borrowing by firms and private households;
- a more equitable distribution of income allowing private households to consume on the basis of rising real incomes rather than an unsustainable expansion of credit;
- a stronger role for public investment, not only as a short-term measure to fight the current crisis but also as a stabiliser of aggregate demand in the longer term;
- more international coordination preventing deficit countries from accumulating unsustainable levels of foreign debt and surplus countries from relying excessively on (debt-financed) demand expansion abroad.

Interestingly, these policy conclusions, which now seem to be widely accepted, come very close to what Keynes (1936, chapter 24) saw as the “social philosophy towards which the General Theory might lead”. In this sense, financialisation is not a completely new phenomenon. Rather, as Keynes recognised, capitalism can take very different institutional forms which can be more or less efficient and socially acceptable.<sup>13</sup> Keynes himself draw a clear distinction between what one may call the 19<sup>th</sup> century “entrepreneurial capitalism”, which was highly dynamic and

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<sup>13</sup> See footnote 2 above and, for a detailed discussion, van Treeck (2009c, chapter 1).

relatively stable, and the 20<sup>th</sup> century “finance capitalism” of the interwar period, which was very unstable and subject to financial crises. Moreover, he anticipated and advocated a type of post-war “managed capitalism”, in which financial market speculation would be contained through effective political regulations and primary concern would be given to the promotion of stable industrial expansion and an equitable distribution of income. Today, the non-functionality of “finance capitalism” is again very visible, and new forms of “managed capitalism” need to be developed under the new circumstances of globalisation and the environmental challenge.

## References

- Altissimo, F., Georgiou, E., Valderrama, M. T., Sterne, G., Stocker, M., Wet, M., Whelan, K., Willman, A. (2005): Wealth and Asset Price Effects on Economic Activity, ECB Occasional Working Paper Series, 29.
- Bach, S., Steiner, V. (2007): Zunehmende Ungleichheit der Markteinkommen: Reale Zuwächse nur für Reiche, DIW Wochenbericht, 13.
- Bellmann, L., Kühl, A. (2007): Weitere Expansion der Leiharbeit? Eine Bestandsaufnahme auf Basis des IAB-Betriebspanels, Studie im Auftrag der Hans-Böckler-Stiftung.
- Bernanke, B. (2005): The Global Saving Glut and the U.S. Current Account Deficit, Remarks at the Homer Jones Lecture, St. Louis, Missouri, 14/04/2005.
- Boone, L., Giorio, C., Richardson, P. (1998): Stock Market Fluctuations and Consumption Behaviour: Some Recent Evidence, OECD Working Paper, 208.
- Chancellor, E. (2005): Crunch Time for Credit? An Inquiry into the State of the Credit System in the United States and Great Britain, Harriman House, Petersfield.
- Chirinko, R. S. 1993. Business fixed investment spending: Modeling strategies, empirical results and policy implications, *Journal of Economic Literature*, vol. 31, pp. 1875-1911.
- Cordonnier, L. (2006): Le profit sans l'accumulation: la recette du capitalisme dominé par la finance, in: *Innovations, Cahiers d'économie de l'innovation*, vol. 23, no. 1, 109-140.
- Cordonnier, L., Van de Velde, F. (2008): Financial Claims and the Glass Ceiling of Profitability, paper presented at the Workshop Financialization: Post-Keynesian Approaches, University of Lille 1 (April 2008).
- Dallery, T., van Treeck, T. (2010): Conflicting claims and equilibrium adjustment processes in a stock-flow consistent macro model, *Review of political Economy*, forthcoming.
- Dustman, C., Ludsteck, J., Schönberg, U. (2007): Revisiting the German Wage Structure, IZA Diskussion Paper, 2685.
- ECB, European Central Bank (2007): Share Buybacks in the Euro Area, ECB Monthly Bulletin, May, pp. 103-111.
- Epstein, G. (2005): Introduction: Financialization and the World Economy, in G. Epstein (ed): *Financialization and the World Economy*, London: Edward Elgar.
- Fama, E. F. (1980): Agency problems and the theory of the firm', *Journal of Political Economy*, vol. 88, no. 2, pp. 288-307.
- Fama, E. F., French, K. R. (2001): Disappearing dividends: changing firm characteristics or lower propensity to pay? *Journal of Financial Economics* 60, pp. 3-44.
- Fazzari, S. M., Hubbard, R. G., Petersen, B. C. (1988): Financing constraints and corporate investment, *Brooking Papers on Economic Activity*, vol. 1, pp. 141-195.
- Galbraith, J. K. (1967): *The New Industrial State*. Harmondsworth, Middlesex: Pelican Book.
- Godley W. (1999): *Seven Unsustainable Processes*, The Levy Economics Institute.
- Godley, W. Papadimitriou, D., Hannsgen, Zezza, Z. (2007): The U.S. Economy: Is There a Way Out of the Woods?, *Strategic Analysis* 11/2007, Levy Institute of Economics.
- Hall, P. A., Gingerich, D. (2004): Varieties of Capitalism and Institutional Complementarities in the Macroeconomy: An Empirical Analysis, MPIfG Discussion Paper, 04/5.
- Hein, E. (2009): A (Post-)Keynesian perspective on 'financialisation', *IMK Studies*, 1/2009.
- Hein, E., Truger, A. (2005): What ever happened to Germany? Is the decline of the former European key currency country caused by structural sclerosis or by macroeconomic mismanagement?, *International Review of Applied Economics*, 19, pp. 3-28.
- Hein, E., Truger, A. (2007): Germany's post-2000 stagnation in the European context – a lesson in macroeconomic mismanagement, in P. Arestis, E. Hein, E. Le Heron (eds): *Aspects of*

- Modern Monetary and Macroeconomic Policies, Basingstoke: Palgrave Macmillan, pp. 223–247.
- Hein, E., van Treeck, T. (2009): Financialisation in Post-Keynesian models of distribution and growth – a systematic review, in Setterfield, M. (2009): *Handbook of Alternative Theories of Economic Growth*, Northampton, MA: Edward Elgar.
- Horn, G., Dröge, K., Sturn, S., van Treeck, T., Zwiener, R. (2009): From the financial crisis to the world economic crisis. The role of inequality. *IMK Policy Brief*, 10/2009
- Jensen, M. 2005. Agency costs of overvalued equity, *Financial Management*, vol. 34, pp. 5-19.
- Jensen, M. C., Meckling, W. H. (1976): Theory of firm – Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-60.
- Kalecki, M. (1937): The principle of increasing risk, *Economica*, vol. 4, pp. 440-47.
- Kalecki, M. (1954): *Theory of Economic Dynamics* London, George Allen.
- Keynes, J.M. (1930): *A Treatise on Money*, two volumes, London: Macmillan.
- Keynes, J.M. (1936 [1997]): *The General Theory of Employment, Interest, and Money*, Prometheus Books: New York.
- Klär, E., Slacalek, J. (2006): Entwicklung der Sparquote in Deutschland – Hindernis für die Erholung der Konsumnachfrage, in: *DIW-Wochenbericht*, 73. Jg., Nr. 40, pp. 537–543.
- Krippner, G. (2005): The financialization of the American economy, *Socio-Economic Review*, 3, pp. 173–208.
- Krugman, P. (2008): *The Conscience of a Liberal*, Penguin: London.
- Kuttner, R. (2007): *Testimony Before the Committee on Financial Services*, U.S. House of Representatives, Washington, D.C., October 2, 2007.
- Lavoie, M. (1992): *Foundations of Post-Keynesian Economic Analysis*, Aldershot: Edward Elgar.
- Lavoie, M. (2004): *L'économie post-keynésienne*, La Découverte : Paris.
- Lavoie, M. (2008): Financialisation issues in a Post-Keynesian stock-flow consistent model, *Intervention. European Journal of Economics and Economic Policies*.
- Lazonick, W., M. O'Sullivan (2000): Maximizing shareholder value: a new ideology for corporate governance, *Economy and Society*, 29, pp. 13-35.
- Lucas, R. E., Jr. (1978): On the Size Distribution of Business Firms, *Rand Journal of Economics*, IX, pp. 508-23.
- Maki, D. M., Palumbo, M. G. (2001): Disentangling the Wealth Effect: A Cohort Analysis of Household Saving in the 1990s, Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series.
- Manne, H.G. (1965): Mergers and the market for corporate control, *Journal of Political Economy*, vol. 73, no. 2, pp. 110-120.
- Martin, R. (2002): *Financialization of Daily Life*, Philadelphia, PA: Temple University Press.
- McKinnon R. (1973): *Money and Capital in Economic Development*. Washington, DC.
- Murphy, K.M., Shleifer, A., Vishny, R.W. (1991): The Allocation of Talent: Implications for Growth, *The Quarterly Journal of Economics*, vol. 106, no. 2, pp. 503-530.
- Ndikumana, L. (1999): Debt service, financing constraints, and fixed investment: evidence from panel data, *Journal of Post Keynesian Economics*, vol. 21, no. 3, pp. 455-78.
- OECD (1998): Shareholder value and the market in corporate control in OECD countries', *Financial Market Trends*, vol. 69, pp. 15–38.
- OECD (2008): *Growing unequal? Income distribution and poverty in OECD countries*, Paris.
- Palley, T. (1994): Debt, aggregate demand, and the business cycle: an analysis in the spirit of Kaldor and Minsky, *Journal of Post Keynesian Economics*, vol. 16, pp. 371-390.

- Papadimitriou, D. P., Shaikh, A., dos Santos, C., Zezza, G. (2002): Is Personal Debt Sustainable?, The Levy Economics Institute of Bard College, Strategic Analysis.
- Parenteau, R. W. (2006): U.S. Household Deficit Spending. A Rendezvous with Reality, Public Policy Briefs 11/2007, Levy Institute of Economics.
- Rappaport, A. (1986): Creating Shareholder Value: The New Standard for Business. Performance, The Free Press, MacMillan, New York.
- Rappaport, A. (2005): The economics of short-term performance obsession, Financial Analysts Journal, vol. 61, no. 3, pp. 65–79.
- Sapir, J. (2009): From Financial Crisis to Turning Point. How the US ‘Subprime Crisis’ Turned into a Worldwide One and Will Change the Global Economy, Internationale Politik und Gesellschaft, 2009/1, pp. 27-44.
- Schettkat, R. (2006): Lohnspreizung: Mythen und Fakten, Düsseldorf: Edition der Hans-Böckler-Stiftung, 183.
- Schulmeister, S. (2004): Der Finanzkapitalismus, die Wachstumskrise und das Europäische Modell, in: Hein, E., Heise, A., Truger, A. (eds): Finanzpolitik in der Kontroverse, Marburg: Metropolis.
- Shaw E.S. (1973): Financial Deepening in Economic Development. New York, Oxford.
- Skott, P., Ryoo, S. (2008a): Macroeconomic implications of financialization, Cambridge Journal of Economics.
- Skott, P., Ryoo, S. (2008b): Financialization in Kaleckian economies with and without labor constraints, Intervention. European Journal of Economics and Economic Policies, vol. 5, no. 2, pp. 357-386..
- Stiglitz, J. and Weiss, A. (1981): Credit rationing in markets with imperfect information, American Economic Review, vol. 71, pp. 393-410.
- SVR (Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Lage) (2007): Das Erreichte nicht verspielen, Wiesbaden.
- van Treeck, T. (2008): Asymmetric income and wealth effects in a non-linear error correction model of US consumer spending, IMK Working Paper, 6/2008.
- van Treeck, T. (2009a): The political economy debate on ‘financialisation’ – a macroeconomic perspective, Review of International Political Economy, forthcoming.
- van Treeck, T. (2009b): A synthetic stock-flow consistent macroeconomic model of financialisation, Cambridge Journal of Economics, vol. 33, no. 3, pp. 467-493.
- van Treeck, T. (2009c): The macroeconomics of ‘financialisation’. Theoretical and empirical aspects, <http://oops.uni-oldenburg.de/volltexte/2009/908/pdf/tremac09.pdf>
- van Treeck, T., Hein, E., Dühaupt, P. (2007): Finanzsystem und wirtschaftliche Entwicklung: Tendenzen in den USA und in Deutschland aus makroökonomischer Perspektive, IMK Studies, 5/2007.
- von Eije, H., Megginson, W.L. (2008): Dividends and share repurchases in the European Union, Journal of Financial Economics, vol. 89, no. 2, pp. 347-374.

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