

# Financialization in Heterodox Economics

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**Abstract:** The term financialization occupies a centre-stage in non-mainstream approaches to economics. Existing research in heterodox economics sees changes in modern finance as a key aspect of the transformation of contemporary capitalism. However, there is considerable diversity in the way financialization is approached, studied, and analyzed in heterodox discussions, implying a range of different analytical frameworks, methodological assumptions, research questions, and strategies. The chapter presents and discusses the main strands of heterodox literature with regard to contemporary finance and overviews alternative research agendas. While the majority of heterodox economic approaches conceptualize financialization as dysfunctional to capitalist society, an emerging research agenda investigates the transformation of class relations and social conflicts that are related to financialization.

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## **Introduction**

There is a general consensus both in mainstream and heterodox economics that the role of finance has increased in contemporary capitalist societies since the 1980s, discussions further fuelled by the 2007 financial meltdown. While mainstream economic approaches have attempted to reconsider the concepts of market efficiency and/or financial risk (for instance, see Blinder, Lo and Solow, 2012 and Shin, 2010), heterodox studies have relied on the term *financialization* to explain how changes in modern finance have become core elements in the transformations of contemporary capitalism. Financialization is one of the most widely used terms in heterodox studies. Coming up with a single and coherent definition is impossible since there is no definition which can be theoretically neutral or unbiased (see also the introductory chapter by Mader, Mertens and van der Zwan, 2019, in this volume). The success and the wide dissemination of the term comes thus at a price, as it has become imprecise, inexplicit, and quite often contradictory.

This chapter reviews and summarizes different research strategies employed within heterodox economic studies on financialization. Given the large volume of relevant research and the limited space of this chapter, it is impossible to include every single study on financialization. Since the focus lies on heterodox economics, we leave out from our analysis important studies from other social disciplines. Our aim is not to give an exhaustive review of the heterodox economic debates but to offer a general overview of the different research pathways that have been followed. This chapter critically reflects the way we interpret these debates, but it is not engaged in direct criticism of arguments with which we disagree or which we see as fundamentally inappropriate for an understanding of contemporary capitalism. In the following,

Section 2 offers an account of post-Keynesian literature, Section 3 covers the Marxist literature, and Section 4 ends up with an indication of alternative approaches to studying modern finance.

### **The post-Keynesian paradigm**

#### *The revenge of rentiers*

The central idea in post-Keynesian discussions is that the rise of finance is associated with the predominance of a particular economic elite (see Epstein, 2019, in this volume). Keynes described this elite as a class of *rentiers* or “functionless investors” (Keynes, 1973: 376). To him, these individuals were akin to Ricardo’s landowners, enjoying incomes founded on scarcity without any real productive contribution. The term used earlier by Veblen to characterize the very same group was *absentee owners* – the class that had managed to subordinate the regime of “traffic in goods” to that of “trading of capital” (Veblen, 1958: 75). Taking the same analytical line, Minsky introduced the term “money manager capitalism” to describe a version of capitalism that is dominated by financial activities (Tymoigne and Wray, 2013: 245). There is a fast-growing body of literature providing a systematic analysis of the current financialization of capitalism in terms of the hegemony of this rentier group. Seen from this perspective, modern financial developments are a consequence of social conflicts being resolved in ways that favour absentee owners over the ‘productive’ classes.

The main idea of this literature strand has been set out by Hein and van Treeck (2010) in an income distribution type of argument. Financialization has reshaped firms’ objectives. A dominance of shareholders has subordinated management and worker

preferences for (long-run) accumulation of the firm to shareholders' preference for (short-term) profitability (see Erturk, 2019, in this volume).<sup>1</sup> This shift in power relations to the benefit of shareholders feeds back on investment. Aspects such as increasing dividend payments and share buybacks restrict the amount of internal funds available for investment projects. The overall outcome has led to a new institutional setting based on profits without investments: a finance-oriented rather than production-oriented economic system with the financial sector gaining importance and absorbing a rising income share relative to the real sector. In what follows, we discuss several aspects of this accumulation regime based on shareholder value maximization as they have been developed in recent post-Keynesian research.

#### *Financialization crowds out physical investment*

The first literature group discussed here draws upon the post-Keynesian argument that financialization (the expansion of the financial sector) has a negative impact on traditional productive purposes (Epstein, 2005; Hein, 2013; Onaran, Stockhammer and Grafl, 2011). The rise of finance and the increasing orientation of the non-financial sector towards financial activities implies a decline in physical investment, thus inducing poor and fragile economic growth, and long-term stagnation in productivity (Tori and Onaran, 2017). This impact of financialization on physical investment is approached from two perspectives.

On the one hand, studies in this literature strand draw on macroeconomic data to discuss the phenomenon of financialization. Stockhammer (2004) uses annual macroeconomic data of the non-financial business sector and offers econometric evidence that rentiers' income (that is, interest and dividend income, which was used

as a proxy for financialization) caused a slowdown in accumulation in the US and France (but not in the UK and Germany) between 1960 and 2000. Using also macroeconomic data from the early 1980s until 2005, van Treeck (2008) provides econometric evidence that for some OECD countries the profit share and rentier income have been decoupled from accumulation, reflected in the growth rate of the capital stock of businesses. This study argues that the link that connects profit share and rentier income with the accumulation of tangible capital has become very loose under financialization. Rather than profit shares arising from accumulation in the real sector, it is related to high dividends and a higher propensity to consume by the dividends' recipients.<sup>2</sup>

On the other hand, there is also post-Keynesian research that addresses the very same question of crowding out from a micro-perspective using data at the firm level.

Orhangazi (2008) analyzes the effect of financialization (captured by financial profit and financial payout ratios) on the investment behaviour of non-financial corporations in the US, for the period of 1973-2003. The author offers evidence that financial investment and profit opportunities have risen and directed funds away from real investment. Increased focus on financial markets have reduced the availability of internal funds for real investments and have shortened the planning horizons of firm management. Demir (2009) analyzes financialization in non-financial companies in Argentina, Mexico, and Turkey in the 1990s with the same emphasis on firm-level data. This study also finds that companies prefer financial investments with a short-term investment focus in contrast to 'irreversible' long-term fixed investments.

Finally, Tori and Onaran (2017) show the impact of financialization on physical investment in certain Western European countries. By using panel data at the firm

level for the period 1995-2015, they find evidence for a negative correlation between financial incomes (interests and dividends) and investment in fixed assets by non-financial corporations.

The literature strand introduced here constructs a dichotomy between the real and financial sector and states that growing investments into financial assets has led to declining investments in the real sector, hence, financialization crowds out physical investment. This shareholder value approach, however, has not gone unchallenged within post-Keynesianism. Dögus (2016) argues that the direction of causality is reversed. Rather than firms making fewer physical investments because of higher distributed dividends, they are able to generate higher dividends when investing more in financial assets. The shareholder value approach is also viewed critically by Kliman and Williams (2015) who question the possibility of financial investments crowding out real investments in an environment of rising availability of external finance. The authors show that in the US the share of profit invested in productive investments has not changed significantly since the 1980s<sup>3</sup>.

#### *Financialization of the household sector*

Post-Keynesian insights into the financialization of firms have been extended to the analysis of the household sector. This line of research accompanies the thriving studies on the financialization of everyday life in economic geography and economic sociology in the 2000s (see Gonzalez, 2019, in this volume).<sup>4</sup> Unlike the studies of the financialization of daily life that aim at offering a holistic account of the changes in household finance, post-Keynesian research is more narrowly focused on rising indebtedness, which is in fact only one part of the overall household balance sheet

transformations. The main insight is that, because of financialization, output growth can be sustained at lower levels of real wage income than would otherwise be possible. Given the increases in income inequality, poorer households rely heavily on debt to keep up with social consumption norms, while richer households benefit from rising capital income (Onaran and Guschanski, 2017). In a comprehensive literature survey, Stockhammer (2015) also supports the idea that financialization is related to a debt-led growth regime in countries that do not pursue export-led growth (see also Stockhammer 2019, in this volume).

Following this train of thought, Barba and Pivetti (2009) question the long run sustainability of a system that uses debt as a substitute for wage growth: at some point households will no longer be able to service debt and this will come with important macroeconomic implications such as a decline in economic growth. Kim, Setterfield and Mei (2015) provide some empirical evidence based on econometric analysis for US households since the 1950s, arguing that household debt accumulated for consumption is unsustainable in the long-run causing economic recessions. This line of argument is often connected to Minsky's financial instability hypothesis (Dymski, 2010; Bellofiore, 2011). Financial instability is defined as the tendency of economies to become unstable due to excessive debt levels. This includes economic units such as households moving from being mainly hedge financed (cash inflows satisfying principal and interest payments) towards speculative (income is only sufficient for interest payments) and then Ponzi financed (income is sufficient for neither interest nor principal payments; Minsky, 2008). Placing income inequality at the heart of this reasoning about economic recessions, Kapeller and Schütz (2013) draw in a synthetic fashion upon Veblen, Keynes, and Minsky. According to their view, households move



increasingly into speculative and Ponzi units due to debt being used to support household consumption in the context of stagnating wages, increasingly precarious work, and less welfare provisions.

The post-Keynesian line of research is enriched by an interesting twist in the argument with regard to household indebtedness offered by the analysis of Dymski, Hernandez and Mohanty (2013). The latter bring race and gender into the discussion and provide a more active role for financial intermediation. This study argues that the relatively more vulnerable position of women and minorities (having less secure jobs, fewer assets, and more insecure prospects) provides the setting for the creation of new exploitative lending instruments to the benefit of banks. Using data from the Survey of Consumer Finances (SCF, conducted by the Federal Reserve Board), Wolff (2014) sheds further light on the condition of US minorities. During the late 2000s relative indebtedness of middle class households increased because of declining net wealth and income, rather than rising absolute indebtedness. In the wake of the 2007 financial meltdown, the elevated homeownership rates in the US and the associated high levels of relative indebtedness is linked to a rise in wealth inequality. This leaves some middle class groups, such as the young, Hispanic, and black households, particularly vulnerable.

The post-Keynesian literature provides undoubtedly valuable insights into household financial behaviour and its impact on the macro-economy. In particular, it highlights the role of income inequality and the concomitant indebtedness of households due to debt being used as substitution for falling wages. This however results in an unequal treatment of the household balance sheet, neglecting the asset side of the balance

sheet and thus presenting only a partial view of rising indebtedness (Michell and Toporowski, 2013). Moreover, despite interacting in a social and institutional structure which is influenced not only by structural economic changes but also by conflicting interests, norms, and conventions, expectations are not “crucial components” in post-Keynesian models but rather “it is the structural interconnections of sectors whose equilibria are not mutually consistent which generate unstable outcomes” (Dymski, 2012: 335). The post-Keynesian literature thus usually dispenses with going "into intricate detail of individual behaviour" in favour of studying the "interaction between various groups and classes of society based on received conventions” (Lavoie, 2015: 92). This interaction between various groups and sectors is picked up in the stock-flow literature.

### *The stock-flow literature*

The financial crisis of 2007 called into question the validity of many existing mainstream macro-modelling studies. It was in this context that the interest in stock-flow consistent (SFC) models was revived.<sup>5</sup> The structure of a SFC model is based on two types of matrices, the flow matrix and the stock matrix. Each matrix consists of a set of rows and columns: the rows represent several assets or commodities and the columns the sectors of the economy to be modelled. These two types of matrices together form a logical network that incorporates a rigorous accounting structure, which is stock-flow consistent (Godley and Lavoie, 2007).<sup>6</sup>

Generally, there are three broad categories in SFC modelling (Caverzasi and Godin, 2015). The first category uses the SFC framework to illustrate an argument and clarify its exposition about consistency and completeness. The second group, which reflects

the great bulk of recent research, uses the SFC structure to set out a theoretical model of dynamic equations and solve it via simulation. The third category of models can be referred to as 'fully empirical' and rely on econometric methods to estimate parameter values of the equations in line with Wynne Godley's (1996) original insights, who was one of the first post-Keynesian economists to establish macro-economic SFC models. Research in the context of SFC modelling is mostly associated with the post-Keynesian school of thought, some of which is concerned with financialization.

SFC models enable the researcher to study aspects which are usually researched in isolation in the form of financial and real variables including credit and wealth as well as production and income. In one instance, Dallery and van Treeck (2011) show with a simple SFC model how the two historical phases of capitalism, the post-Second World-War “Fordist” regime and the recent “financialization” regime, differ with regard to the relationship between managers, workers and financial institutions. Whereas in the “Fordist” regime managers and workers are the dominant groups determining profitability, in the financialization regime shareholders put pressure on managers and workers to generate profits. In another instance, Botta, Caverzasi, and Tori (2015) model the shadow banking system using a SFC model, while Sawyer and Veronese Passarella (2017) explore, also in the context of a SFC model, how the theory of monetary circuits reflects the stylized features of financialization. Finally, there has been some stock-flow consistent modelling of the main post-Keynesian insight with regard to household indebtedness. Nikolaidi (2015) argues that securitisation and wage stagnation can jointly affect financial fragility and can be viewed as two main root causes of the global financial crisis.

While the studies in the previous two sections confirm the main stylized facts of financialization, such as a stronger focus on financial investment and rising indebtedness of households, Skott and Ryoo (2008) emphasize the need to avoid partial analyses and develop holistic accounts of financialization. It is, for example, essential to depict how firm's investment decisions interact with other sectors such as households and the government. With SFC models it is possible to overcome the limitations of partial analyses and study the interactions of different sectors at the same time. However, SFC models become increasingly complex when working with real data and often retreat to simulations with the help of assumed parameters (Lavoie, 2008).

### **Marxist approaches**

#### *Underconsumptionist approaches and emphasis on the rate of profit*

There has been a long tradition of Marxist approaches that refer to the rate of profit to analyze capitalist accumulation and crises. A significant share of Marxist explanations of financialization interprets developments in finance as a by-product of the historical trend in the profit rate. In this regard, the rise of finance is an unstable (and therefore temporary) solution to capitalism's long-term problem of underconsumption. The trend in the profit rate reflects capitalism's inability to absorb the final economic product. There are two alternative versions of the underconsumptionist argument.

The first interprets financialization as a result of high capitalist profitability. If profits are mostly saved and wages are relatively low in comparison to profits, the potential productive output cannot be absorbed when there is no rise in final consumption.

Without any corrective action, capitalists are faced with a dearth of genuine

investment-outlets and as a result build up excess capital. From this perspective, financialization appears as a remedy to lacking demand, recycling the excess consumption power from capitalists to workers in the form of debt and/or devolving into speculative activities. Similar to the post-Keynesian studies, financial innovation is argued here to have enabled households to take on debt to finance consumption while capitalists can conduct speculative investments resulting in asset price increases. This is clearly an advantageous situation for capitalists, because it solves the problem of surplus capital without jeopardizing capitalists' interests and income position. The only drawback is that financial recycling cannot be viewed as a permanent solution and adds to the fragility of the system, eventually resulting in financial bubbles followed by crises<sup>7</sup>. This analysis appears under various forms in the accounts offered by, among others, Husson (2012), Mohun (2013), Resnick and Wolff (2010).

The second version of the profit-rate explanation also argues from underconsumption but proposes low profitability as its cause. Due to squeezed wages (rather than, as above, high profits) and the concomitant low demand, output cannot be absorbed. The resultant poor profitability leads to stagnant and excess capital because capital can only be channelled into production at a declining rate. In the absence of other solutions that might boost demand, financial recycling becomes the means of intermediation, decongesting the accumulation of surplus capital. The argument here is essentially the same as in the previous scenario: financial debt and credit bubbles offer capital the easiest means for tackling declining profitability without incurring major costs (Bakir, 2015; Maniatis, 2012).

Some authors (Dünhaupt, 2016; Goldstein, 2009; Kotz, 2013), whilst remaining true to the overall spirit of the argument of underconsumption, link low profitability, in addition to low wage incomes (demand), to high values of constant capital already invested (overcapacity). Demand thus always lags behind productive capacity. Even as profit falls, there will be continuing investment which will add to the overall ‘amount’ of capital. As a result, the productive capacity will exceed demand. This line of argument emphasizes over-investment of capital relative to realized profitability. It identifies an additional channel via which downward pressure is exerted on the profit rate: the numerator (i.e. the decrease in realized profit) is not the only thing that counts; so does the denominator (i.e. the increase in constant capital and the creation of overcapacity).

Many current approaches to financialization can be viewed as falling within the theoretical tradition outlined here in which “financialization is merely a way of compensating for the underlying disease affecting capital accumulation itself” (Foster and Magdoff, 2009: 18).<sup>8</sup> The notion of a lack of final demand and the associated conflicts over income between capitalists (and managers) and workers bear a striking resemblance with many post-Keynesian approaches discussed above. However, the emphasis here falls on the rate of profit. To capture and discuss the long-term developments in capital accumulation, the calculation of the profit rate must commence before the 1970s or 1980s, which was when financialization is seen to have taken off. Given that such long-term macroeconomic series of national accounts exist only for the US or the UK, this train of research has necessarily narrowed its focus on these two countries.

### *Financialization as income expropriation*

The idea that finance has a predatory element that ‘squeezes’ other industrial or “productive” economic activities is also known to the Marxist tradition. At the start of the twentieth century—even before Keynes and Veblen had argued this—Hilferding (1981: 226) maintained that a form of capitalism was possible in which the industrial sector was subordinate to the financial sector. Although there is not the space here to give a proper account of Hilferding’s point of view (which was greatly influenced by the historical conditions prevailing in Germany at that time), it is worth noting that his ideas have inspired a number of recent theorizations.

Fine, for instance, views neoliberalism as a capitalist regime that lays stress on “financial-speculative activities as opposed to industrial investment as an increasingly important source of profit” (Fine, 2010: 113; see Christophers and Fine, 2019, in this volume). One form of capital (the interest-bearing capital) predominates over all other forms (industrial etc.). In a similar fashion, Jessop (2015) argues that financialization comprises the growth of non-functioning rather than functioning capital, where non-functioning capital is capital which does not contribute to the growth of the real economy. Crotty (2005), as well, argues that in the case of the US, the increasing role of finance in the non-financial corporate sector resulted in decreasing capital accumulation and lower capital investment.

In the same train of thought, exploring the impact of financialization in a global perspective, Ivanova (2012) and Mah-Hui and Ee (2011) show in their studies how the global financial value chain has been transformed. Over-investment in the periphery and debt-driven consumption bubbles in the core illustrate the rising

importance of “non-productive elements” such as finance (Ivanova, 2012: 67). Finally, Lapavistas (2009) sees the financial expropriation of workers by capitalists and banks as an additional source of profit that has emerged in the sphere of circulation as a result of the poor level of real accumulation since the late 1970s.<sup>9</sup> Both post-Keynesian and the majority of Marxist approaches thus depict finance as dysfunctional developments within a capitalist society which take away resources from a productive into an unproductive sector.

### **Financialization: taking stock and moving forward**

The analytical canvas of the existing heterodox approaches to financialization is huge. Despite the variety and the wealth of insights and empirical findings, arguably the great majority of the abovementioned literature underestimates the autonomy of financial innovation in the workings of capitalist societies. Finance and its innate socio-technological developments (see Chiapello, 2019, in this volume) are mostly seen as passive and adjustable to external factors (e.g. wage squeeze, insufficient effective demand, over-accumulated fixed capital relative to demand etc.). Finance is thus often interpreted as *ahistorical*, in the sense that its own history as a social domain is merely a reflection of external economic developments. And yet, one major lesson from economic history is that financial innovation is effective, central, and immanent (but not passive) in the accumulation of capital (Kindleberger, 1984; see also Beck and Knafo, 2019, in this volume, on the uses of history). This is indeed one of Marx's major contributions, a fact mostly overlooked. Finance in its contemporary version encompasses much more than accumulated liabilities and increased indebtedness. It presupposes substantial levels of investment, analytical research, and financial innovation and it is shaped by major institutional developments, economic



strategies, social conflicts, and state regulations at the global level. All these elements have their own unique histories, institutional paces, and social temporalities.

There are attempts to offer an alternative analysis of financialization in a Marxist fashion, looking at ways finance transforms class and capital.<sup>10</sup> In a genuine interdisciplinary approach, Martin (2002, 2007, 2009) and Bryan and Rafferty (2006) treat financialization not as some sort of distortion or simply a shift in the balance of power between classes and the generation of economic volatility, but also as a tool in re-constituting our understanding of class as a formal economic category and class relations (Bryan, Martin and Rafferty 2009; Bryan, Rafferty and Jefferis, 2015). The focus is thus on the 'positive' side of social transformations; 'positive' not in the sense that the rise of finance is de facto beneficial but that it is intertwined with a series of social and class transformations and cannot be undone. In a similar line of argument, Sotiropoulos, Milios and Lapatsioras (2013) argue that the rise of finance sets forth a technology of power (in which risk and its commodification play a central role) that changes the workings of contemporary capitalism. This anti-teleological line of research, arguing that there is not an ideal model of capitalism which has been sacrificed to finance, but rather assessing the ways in which capitalism transforms itself, offers alternative and promising lines of research.

## References

- Arestis, P., Gonzalez, A.R. and Dejuan, O. (2012). Modelling accumulation: A theoretical and empirical application of the accelerator principle under uncertainty. *Intervention. European Journal of Economics and Economic Policies*, 9(2), pp. 255-275.
- Arrighi, G. (1999). Globalization, State Sovereignty, and the 'Endless' Accumulation of Capital. In: D. A. Smith, D. J. Solinger and S. C. Topik, eds., *States and Sovereignty in the Global Economy*. London and New York: Routledge, pp.53-73.
- Auerbach, P. (2016). *Socialist Optimism*. New York: Palgrave Macmillan.
- Bakir, E. (2015). Capital Accumulation, Profitability, and Crisis: Neoliberalism in the United States. *Review of Radical Political Economics*, 47(3), pp. 389-411.
- Barba, A. and Pivetti, M. (2009). Rising household debt: Its causes and macroeconomic implications – a long-period analysis. *Cambridge Journal of Economics*, 33(1), pp. 113-137.
- Bellofiore, R. (2011). From Marx to Minsky. In: H. Ganssmann, ed., *New Approaches to Monetary Theory – Interdisciplinary Perspectives*. London and New York: Routledge, pp.191-211.
- Blinder, A. S., Lo, A. W. and Solow, R. M. (2012). *Rethinking the Financial Crisis*. New York: Russell Sage Foundation.
- Botta, A., Caverzasi, E. and Tori, D. (2015). Financial-real side interactions in the Monetary Circuit: Loving or Dangerous Hugs? *International Journal of Political Economy*, 44(3), pp. 196-227.
- Brenner, R. (2006). *The Economics of Global Turbulence*. London: Verso Books.
- Bryan, D. and Rafferty, M. (2006). *Capitalism with Derivatives: A Political Economy of Financial Derivatives, Capital and Class*. New York and London: Palgrave Macmillan.
- Bryan, D., Martin, R. and Rafferty, M. (2009). Financialization and Marx: Giving Labor and Capital a Financial Makeover. *Review of Radical Political Economics*, 41(4), pp. 458-472.
- Bryan D., Rafferty M. and Jefferis, C. (2015). Risk and Value: Finance, Labor, and Production. *South Atlantic Quarterly*, 114 (2), pp. 307-329.
- Caverzasi, E. and Godin, A. (2015). Post – Keynesian stock-flow-consistent modelling: a survey. *Cambridge Journal of Economics*, 39(1), pp. 157-187.
- Clark, G.L. (2012). Pensions or Property? *Environment and Planning A*, 4(5), pp. 1185-1199.
- Coppock, S. (2013). The everyday geographies of financialisation: impacts, subjects and alternatives. *Cambridge Journal of Regions, Economy and Society*, 6(3), pp. 479- 500.
- Cordonnier, L. and Van de Velde, F. (2015). The demands of finance and the glass ceiling of profit without investment. *Cambridge Journal of Economics*, 39(3), pp. 871-885.
- Crotty, J. (2005). The Neoliberal Paradox: The Impact of Destructive Product Market Competition and 'Modern' Financial Markets on Nonfinancial Corporation Performance in the Neoliberal Era. In: G. Epstein, ed., *Financialization and the World Economy*. Cheltenham: Edward Elgar, pp.77-110.
- Dallery, T. (2009). Post-Keynesian Theories of the Firm under Financialization. *Review of Radical Political Economy*, 41(4), pp. 492-515.

- Dallery, T. and van Treeck, T. (2011). Conflicting claims and equilibrium adjustment processes in a stock-flow consistent macroeconomic model. *Review of Political Economy*, 23(2), pp. 189 -211.
- Demir, F. (2009). Financial liberalization, private investment and portfolio choice: Financialization of real sectors in emerging markets. *Journal of Development Economics*, 88(2), pp. 314–24.
- De Souza, J. and Epstein, G. (2014). *Sectoral net lending in six financial centres*. PERI Working Paper Series. No. 346. Amherst, MA: Political Economy Research Institute.
- Dögus, I. (2016). *A Minskian criticism on the shareholder pressure approach of financialisation*. ZÖSS Discussion Paper. No.1868-4947/53. Hamburg: Zentrum fuer Ökonomische und Soziologische Studien.
- Dünhaupt, P. (2016). *Financialization and the Crises of Capitalism*. IPE Working Paper. No.67/2016. Berlin: Berlin Institute for International Political Economy.
- Dymski, G. (2010). Why the subprime crisis is different: a Minskyan approach. *Cambridge Journal of Economics*, 34(2), pp. 239-255.
- Dymski, G. (2012). Keynesian approaches to financial crisis. In: E. Hein and Stockhammer, eds., *A Modern Guide to Keynesian Macroeconomics and Economic Policies*. Cheltenham: Edward Elgar, pp. 325-351.
- Dymski, G., Hernandez, L. and Mohanty, L. (2013). Race, Gender, Power, and the US Subprime Mortgage and Foreclosure Crisis: A Meso Analysis. *Feminist Economics*, 19(3), pp. 124-151.
- Epstein, G.A. (2005). *Financialization and the World Economy*. Cheltenham: Edward Elgar.
- Fine, B. (2010). Locating Financialisation. *Historical Materialism*, 18, pp. 97–116.
- Foster, J.B. and Magdoff, F. (2009). *The Great Financial Crisis: Causes and Consequences*. New York: Monthly Review.
- Godley, W. (1996). *Money, Finance, and National Income Determination*. PERI Working Paper Series. No.167. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Godley, W. and Lavoie, M. (2007). *Monetary Economics - An Integrated Approach to Credit, Income, Production and Wealth*. Basingstoke: Palgrave Macmillan.
- Goldstein, J.P. (2009). An introduction to a unified heterodox macroeconomic theory. In: J.P. Goldstein and M.G. Hillard, eds., *Heterodox Macroeconomics – Keynes, Marx and globalization*. London and New York: Routledge, pp. 36-53.
- Harvey, D. (2010). *The Enigma of Capital and the Crises of Capitalism*. London: Profile Books Ltd.
- Hein, E. (2013). *The Macroeconomics of Finance-Dominated Capitalism – And its Crisis*. Cheltenham: Edward Elgar.
- Hein, E. and van Treeck, T. (2010). 'Financialisation' and rising shareholder power in Kaleckian/post-Kaleckian models of distribution and growth. *Review of Political Economy*, 22(2), pp. 205-33.
- Hilferding, R. (1981). *Finance Capital*. London: Routledge and Kegan Paul.
- Husson, M. (2012). Where is the Crisis Going? In: F. Leplat and Ö. Onaran, eds., *Capitalism: Crisis and Alternatives*. London: Resistance Books, pp. 11-39.
- Ivanova, M.N. (2012). Marx, Minsky, and the Great Recession. *Review of Radical Political Economics*, 45(1), pp. 59-75.
- Jessop, B. (2015). The Symptomatology of Crises, Reading Crises and Learning from Them: Some Critical Realist Reflections. *Journal of Critical Realism*, 14(3), pp. 238-271.

- Kapeller, J. and Schütz, B. (2013). Exploring Pluralist Economics: The Case of the Minsky- Veblen Cycles. *Journal of Economics Issues*, 47(2), pp. 515-523.
- Keynes, J.M. (1973). *The general theory of employment, interest and money*. London: Macmillan.
- Kindleberger, C.P. (1984). Financial institutions and economic development: A comparison of Great Britain and France in the Eighteenth and nineteenth centuries. *Explorations in Economic History*, 21, pp. 103-124.
- Kim, Y., Setterfield, M. and Mei, Y. (2015). Aggregate consumption and debt accumulation: an empirical examination of household behaviour. *Cambridge Journal of Economics*, 39 (1), pp. 93-112.
- Kliman, A. and Williams, S. (2015). Why ‘financialisation’ hasn’t depressed US productive investment. *Cambridge Journal of Economics*, 39(1), pp. 67–92.
- Kotz, D.M. (2013). The Current Economic Crisis in the United States: A Crisis of Over-investment. *Review of Radical Political Economics*, 45(3), pp. 284-294.
- Langley, P. (2008). *The Everyday Life of Global Finance: Saving and Borrowing in Anglo- America*. Oxford: Oxford University Press.
- Lapavistas, C. (2009). Financialised Capitalism: Crisis and Financial Expropriation. *Historical Materialism*, 17, pp. 114-148.
- Lavoie, M. (2008). Financialisation Issues in a Post-Keynesian Stock-flow Consistent Model. *Intervention. European Journal of Economics and Economic Policies*, 5(2), 331–356.
- Lavoie, M. (2015). *Post-Keynesian Economics: New Foundations*. Cheltenham. Edward Elgar.
- Lazonick, W. and O'Sullivan, M. (2000). Maximising Shareholder Value: A New Ideology for Corporate Governance. *Economy and Society*, 29(1), pp. 13-35.
- Lazzarato, M. (2012). *The Making of Indebted Man*. Los Angeles: Semiotext(e).
- Lysandrou, P. (2011). Global Inequality, Wealth Concentration and the Subprime Crisis: A Marxian Commodity Theory Analysis. *Development and Change*, 42(1), pp. 183-208.
- Lysandrou, P. (2016). The Colonisation of the Future: An Alternative View of Financialisation and its Portents. *Journal of Post Keynesian Economics*, 39(4), pp. 444-472.
- Mah-Hui, M.L. and Ee, K.E. (2011). From Marx to Morgan Stanley: Inequality and Financial Crisis. *Development and Change*, 42(1), pp. 209-227.
- Maniatis, T. (2012). Marxist Theories of Crisis and the Current Economic. *Crisis, Forum for Social Economics*, 41(1), pp. 6-29.
- Martin, R. (2002). *Financialization of Daily Life*. Philadelphia: Temple University Press.
- Martin, R. (2007). *An Empire of Indifference: American War and the Financial Logic of Risk Management*. Durham, NC: Duke University Press.
- Martin, R. (2009). The Twin Towers of Financialization: Entanglements of Political and Cultural Economies. *The Global South*, 3(1), pp. 108-125.
- McNally, D. (2009). From Financial Crisis to World-Slump: Accumulation, Financialisation and the Global Slowdown. *Historical Materialism*, 17(2), pp. 35-83.
- Michell, J. and Toporowski, J. (2013). Critical Observations on Financialization and the Financial Process. *International Journal of Political Economy*, 42(4), pp. 67-82.
- Minsky, H.P. (2008). *Stabilizing an Unstable Economy*. 2<sup>nd</sup> ed. New York: McGraw Hill.

- Mohun, S. (2013). Rate of profit and crisis in the US economy: A class perspective. In: T. Michl, A. Rezai and L. Taylor, eds., *Social fairness and economics: Critical economic theory in the spirit of Duncan Foley*. London and New York: Routledge.
- Nikolaidi, M. (2015). *Securitisation, wage stagnation and financial fragility: a stock-flow consistent perspective*. GPERC Working Paper Series. No.14078. Greenwich: Greenwich Political Economy Research Centre.
- Onaran, Ö. and Guschanski, A. (2017). Capital lessons: Labour, inequality and how to respond. *IPPR Progressive Review*, 24(3), pp. 152-162
- Onaran, Ö., Stockhammer, E. and Grafl, L. (2011). Financialisation, income distribution and aggregate demand in the USA. *Cambridge Journal of Economics*, 35(4), pp. 637-661.
- Orhangazi, Ö. (2008). Financialisation and capital accumulation in the non-financial corporate sector: A theoretical and empirical investigation on the US economy: 1973–2003. *Cambridge Journal of Economics*, 32(6), pp. 863–886.
- Resnick, S. and Wolff, R. (2010). The Economic Crisis: A Marxian Interpretation. *Rethinking Marxism*, 22(2), pp. 170–186.
- Sawyer, M. and Veronese Passarella, M. (2017). The Monetary Circuit in the Age of Financialisation: A Stock-Flow Consistent Model with a Twofold Banking Sector. *Metroeconomica*, 68(2), pp. 321–353.
- Shin, H. S. (2010). *Risk and Liquidity*. New York: Oxford University Press.
- Skott, P. and Ryoo, S. (2008). Macroeconomic implications of financialisation. *Cambridge Journal of Economics*, 32(6), pp. 827–862.
- Smith, S.J. (2008). Owner-occupation: At home with a hybrid of money and materials. *Environment and Planning A*, 40(3), pp. 520–535.
- Smith, G. (2018). *A Political Economy of Modern Finance and its Economic Consequences*. Unpublished doctoral thesis. The Open University: Milton Keynes.
- Sotiropoulos, D.P., Milios, J. and Lapatsioras, S. (2013). *A Political Economy of Contemporary Capitalism and its Crisis: Demystifying Finance*. London: Routledge.
- Stockhammer, E. (2004). Financialisation and the slowdown of accumulation. *Cambridge Journal of Economics*, 28(3), pp. 371–404.
- Stockhammer, E. (2015). Rising Inequality as a cause of the present crisis. *Cambridge Journal of Economics*, 39(3), pp. 935-958.
- Tori, D. and Onaran, Ö (2017). *The Effects of Financialisation and Financial Development on Investment: Evidence from Firm-Level Data in Europe*. GPERC Working Paper Series. No.44. London: Greenwich Political Economy Research Centre.
- Tymoigne, E. and Wray, L.R. (2013). *The Rise and Fall of Money Manager Capitalism – Minsky’s half century from World War Two to the Great Recession*. New York: Routledge.
- van Treeck, T. (2008). Reconsidering the Investment-Profit Nexus in Finance-Led economics: an ARDL-Based Approach. *Metroeconomica*, 59(3), pp. 371-404.
- Veblen, T. (1958). *The Theory of Business Enterprise*. A Mentor Book. New York, NY: The New American Library of World Literature.
- Wolff, E.N. (2014). Household wealth trends in the United States, 1983-2010. *Oxford Review of Economic Policy*, 30 (1), pp. 21-43.

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<sup>1</sup> Quite influential has also been the intervention by Lazonick and O’Sullivan (2000) outlining the negative effects of shareholder value maximization. As we shall see below, this idea has become central in the post-Keynesian literature (see, for instance Dallery, 2009; Cordonnier and Van de Velde, 2015).

<sup>2</sup> For a similar line of research, see Arestis, Gonzalez and Dejuan (2012), De Souza and Epstein (2014).

<sup>3</sup> For a further criticism see Lysandrou (2011, 2016) who has stressed that it is both the demand and the supply of financial securities that is important in contemporary capitalism, thus, offering a somewhat different approach to understanding the role of financial innovation.

<sup>4</sup> See for example Clark (2012), Coppock (2013), Langley (2008), Smith (2008).

<sup>5</sup> For an excellent analysis of the history of SFC modelling see Smith (2018).

<sup>6</sup> For a thorough description of the SFC modelling see Godley (1996) and Godley and Lavoie (2007).

<sup>7</sup> It is quite striking that most of the abovementioned Marxist and post-Keynesian approaches rely on the concept of asset bubbles. This concept is from mainstream financial economics and indicates a situation in which the market price of an asset is much higher than its 'fundamental value'. The notion of fundamental or intrinsic value is however problematic because it is not theoretically neutral.

<sup>8</sup> See also Brenner (2006), Harvey (2010), Lazzarato (2012), McNally (2009).

<sup>9</sup> The discussed themes in this section do not fully reflect the analytical wealth of all relevant approaches. For instance, Arrighi (1999) argues that the modern neoliberal organization of capitalism is a reflection of the changing hegemonic position of the USA. Faced with declining profit opportunities in commodity markets, financial capital flows elsewhere in search for profits.

<sup>10</sup> For an interesting attempt to rethink alternatives to contemporary capitalism see Auerbach (2016).