

1. The transition towards finance-dominated capitalism: French Regulation School, Social Structures of Accumulation and post-Keynesian approaches compared

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1.1 INTRODUCTION

This chapter provides a comparative overview of some important literature on financial, economic and social systems with an eye towards explaining the tendencies towards finance-dominated capitalism or ‘financialization’, broadly understood as ‘the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies’ (Epstein 2005a, p. 3). The chapter focuses on important strands of the literature, the French Regulation School, the Social Structures of Accumulation approach, mainly generated in the USA, and the contributions by several post-Keynesian authors, with a focus on the long-run views contained in Hyman Minsky’s work, in particular. What these approaches have in common is the notion that capitalist development is embedded in social institutions and that there is a kind of interdependence between the set of institutions and economic development, each feeding back on the other. Therefore, in each of these approaches different stages of development, or different regimes, of modern capitalism can be distinguished, and some insights into the dynamics of these regimes can be obtained. These approaches are therefore particularly suited to provide the theoretical background for the examination of financialization tendencies, which have dominated modern capitalism to different degrees in different countries, roughly starting in the late 1970s or early 1980s in the USA and the UK and later

in other developed capitalist economies, as well as in emerging market economies. Furthermore, these approaches provide some basic insights into the internal dynamics of financialization leading to the crisis of this stage of development of modern capitalism, which started in 2007 in the USA and rapidly spread all over the world. However, neither the precise analysis of the crisis from these different perspectives nor the long-run developments leading to the crisis are the focus of the present chapter. We will rather concentrate on the underlying and more fundamental analysis of the relationship and the interaction between the economic, financial and social systems in these approaches.

In order to take a comparative perspective, we have chosen the following four-step pattern for the outline of each of the approaches. First, we will sketch the basic structure of the approaches in order to single out how each of them views the interaction between social institutions and the economy and the related dynamics regarding the development of the institutional structure and the associated stages or regimes of economic development. Then we will tackle the question of how these approaches view the structural breaks or the regime shifts in the long-run development of modern capitalism, which have triggered or at least contributed to the emergence of a type of capitalism dominated by finance, or, in short, to the emergence of financialization. It should be noted already here that the terminology chosen in the different approaches is of course not homogeneous. But, as will be seen below, each of the approaches provides some ideas about the regime shift towards what is now widely called financialization. In the third step we will outline how these different approaches view the main characteristics and features of financialization, and in the fourth step we will deal with the respective views on the consequences of financialization for long-run economic and social development, including the crisis of this stage of development.

In section 1.2 we will apply this four-step method to the French Regulation School, and in section 1.3 we will address the Social Structures of Accumulation approach. As will be seen, these approaches are quite similar and show a high degree of overlapping, even in terms of contributing authors. In section 1.4 we will review some post-Keynesian contributions, and in section 1.5 we will focus on Minsky's work on different financial regimes in the long-run development of modern capitalism and his notion of 'money manager capitalism', which describes the most recent stage before the crisis. Although we consider Minsky to be part of post-Keynesian economics, we have decided to treat his approach separately, because he has provided a specific view about the dynamics and the succession of different financial regimes which merits separate and more extensive treatment. Section 1.6 will compare and conclude.

1.2 THE FRENCH REGULATION SCHOOL

1.2.1 Basic Structure of the Regulation Theory

Michel Aglietta, the founding father of the French Regulation School,¹ describes the main idea of his *A Theory of Capitalist Regulation* ([1976] 2000) as follows:

The essential idea of *A Theory of Capitalist Regulation* is that the dynamism of capital represents an enormous productive potential but that it is also a blind force. It does not contain a self-limiting mechanism of its own, nor is it guided in a direction that would enable it to fulfil the capitalists' dream of perpetual accumulation. To put it another way, capitalism has the inherent ability to mobilize human energy and transform it into growth, but it does not have the capacity to convert the clash of individual interests into a coherent global system. (Aglietta 1998, p. 49)

The ultimately inevitable periods of crises in fact indicate breakdowns in the continuous reproduction of social relations and serve for the creation of new social relations. Robert Boyer (2000, 2005, 2010, 2013), another important proponent of the regulation theory, defines the aim of the regulation approach as explaining the rise and the subsequent crisis of modes of development. The mode of development is given by the combination of the 'accumulation regime' and the 'mode of regulation'.

The 'accumulation regime' refers to the organization of production and distribution of value and surplus value. The 'mode of regulation', on the other hand, refers to the institutions, norms and practices accompanying the 'accumulation regime' and providing the conditions for its long-run reproducibility. Jessop (1997, p. 291) describes the 'mode of regulation' as 'an emergent ensemble of rules, norms, conventions, patterns of conduct, social networks, organizational forms and institutions which can stabilize an accumulation regime'. The usual way to analyse and describe a mode of regulation is by examining five different dimensions (Jessop 1997; Guttman 2012): the wage relation (organization of work, labour markets, wage bargaining, wages and employment); the enterprise form (organization, source of profits, form and degree of competition); the monetary regime (money, banking and credit system, monetary policy); the state (forms of intervention); and international regimes (regarding trade, direct investment, capital flows, international currency, exchange rate system, political arrangements). The specific combination of an accumulation regime and a mode of regulation, which sufficiently complement each other and are thus able to allow for relatively long-lasting capitalist expansion, is then called the 'mode of development'.

Over time, contradictions emerge in the mode of regulation, stemming from the conflicts between classes, firms, governments and political groups (Brenner and Glick 1991). This feeds back on the regime of accumulation and eventually results in a structural crisis. The transition from one mode of development to another is ‘discontinuous, creatively destructive, and mediated through class conflict and institutional change’ (Jessop 1997, p.292). There is, in other words, no predictable outcome with respect to what the new mode of regulation, accumulation regime and thus mode of development will be. It will depend on the historical context, and ‘out of these historically indeterminate processes of competitive economic war and socioeconomic and political struggle, one out of a range of alternative resolutions of the crisis is eventually hit upon’ (Brenner and Glick 1991, p.48).

In summary, the regulation theory rests on several important ideas, namely, that the society (and economic activities within it) is characterized by a network of social relations, which are inherently contradictory given the conflicting claims of various social groups. These contradictions make the ruptures in social relations, that is, crises, an expected state of affairs, whereas the non-crisis is more of a chance event. A prolonged stability in the reproduction of capital, that is, the accumulation regime, can be achieved when it is institutionalized in a set of practices, norms and conventions adopted by the society at the time, that is, in a mode of regulation (Lipietz 1987).

1.2.2 Structural Breaks or Regime Shifts towards Financialization and ‘Finance-led’ Growth

The regulation theory coined the term ‘Fordist accumulation regime’ to describe the prolonged period of stable growth following the Second World War in the United States (and France), based on an unprecedented compromise between capital and labour (Boyer 2010). Fordism can be broadly described as a mode of development based on an economic and institutional environment favourable to mass production and mass consumption. From the point of view of the social and economic functions of the state (government), the Fordist era was characterized by the ‘Keynesian welfare state’ (Jessop 1997). The principles of the Keynesian welfare state consisted in securing full employment under the conditions of relatively closed economies and influencing the distribution of income via collective bargaining regulation so that economic growth could be sustained by rising effective domestic demand. Collective mass consumption was thus a crucial feature of the Fordist mode of development.

In the early 1970s the Fordist accumulation regime and mode of

development entered a structural crisis, manifesting itself as a crisis of productivity growth. A fall in the rate of profit from around the mid-1960s onwards was interpreted 'as a result of labour-productivity growth insufficient to raise the rate of surplus value to a degree that can counteract the rising organic composition of capital' (Brenner and Glick 1991, p. 97). This explanation of the crisis therefore rests on Marx's law of the tendency of the general rate of profit to fall due to technological change, as developed in *Capital*, Volume 3 (Marx 1894, Part III). This can be found in Aglietta's *A Theory of Capitalist Regulation* ([1976] 2000, p. 162) as well as in Boyer (1987).

Indeed Aglietta ([1976] 2000) gives two accounts of the crisis. Firstly, 'the watershed years of 1958–61 saw an acceleration in the fall in social wage costs proceeding from a sudden change in the forms of class struggle to the detriment of the wage earners' (Aglietta [1976] 2000, p. 99), which could be understood as a potential for a crisis of underconsumption. However, later on he argues that:

the crisis of Fordism is first of all the crisis of a mode of labour organization. It is expressed above all in the intensification of class struggles at the point of production . . . [T]hese struggles showed the limits to the increase in the rate of surplus-value that were inherent in the relations of production organized in this type of labour process . . . The development of the department producing means of production encounters a constraint, since it no longer gives rise to technical mutations leading to a further mechanization of labour, capable of generating a sufficient saving in direct labour time to compensate for the increase in the organic composition of capital. (Aglietta [1976] 2000, p. 162)

Boyer (1987, pp. 30–31) also underlines the problems in generating sufficient productivity growth:

Fordism is fairly efficient as regards labour and capital productivity when it replaces older systems, but it becomes harder and harder to get the same results when the issue is to deepen – and no more to extend – the same organizational methods. Hence a possible decline in productivity growth rates (in the US at the mid-Sixties) and/or in capital efficiency (in almost all OECD countries since the same period).

Boyer (2000) points out that, since the collapse of the Fordist mode of development, several different regimes have emerged. In particular, a 'finance-led growth regime' seems to have characterized the USA and the UK since the 1990s. Other regimes described in Boyer (2000) are, for instance, 'competition-led' (most of the OECD countries since the mid-1980s), 'service-led' (the USA during the 1980s), 'knowledge-based economy' (the USA during the 1990s), 'Toyotism' (Japan until the 1990s)

and ‘export-led growth’ (East Asian emerging economics, until the 1997 crisis). He also argues that it is likely that, given the alternative regimes observed in various countries, a hybrid form based on their different characteristics will ultimately prevail, with each country emphasizing some features over others depending on its own political, social and economic legacy.

However, we will focus here on the literature surrounding the ‘finance-led growth regime’ which has been present primarily in the USA and, to some extent, the UK. The transition from Fordism to finance-led growth is considered to be a product of a longer structural transformation following a period of economic stagnation and crisis in the 1970s. Whereas Fordism was characterized by a compromise between managers and workers, the finance-led growth regime is dominated by alliances between investors/rentiers and managers. In particular, information technology and financial liberalization were driving and shaping the new growth regime (Aglietta and Breton 2001).

1.2.3 Characteristics of the Finance-led Growth Regime

In the USA, the changes brought about by the crisis of the Fordist regime were reflected in the increase in international trade and imports, financial liberalization and innovation, and labour market deregulation, all of which have contributed to eroding the bargaining power of trade unions, so that ultimately the managers began responding increasingly to the demands of financial markets relative to those of labour (Boyer 2010). A new ‘social compromise’ emerged from these developments: shareholders acknowledge the power of managers, and top managers take on the principles of shareholder value. The interests of workers are not represented in this new social compromise. ‘This *new alliance* therefore brings a *shift in the hierarchy of institutional forms* and, at least potentially, makes possible a genuine accumulation regime’ (Boyer 2010, p. 232, emphasis in the original). New financial players have thus gained the power to influence the decision-making of corporate managers.

The type of corporate governance determines (and can be seen from) the way in which profits are used and how the accumulation process is financed. Aglietta and Breton (2001) distinguish three types of corporate control through finance: 1) control through debt (exerted by banks, in bank-based financial systems); 2) control by the securities market, or direct control (the main players here are majority shareholders in market-based financial systems); and 3) control by shares or the stock market (minority shareholders and potential predators in market-based financial systems are most important players here). The latter type best describes

the case of the USA in recent decades, and is the basis of shareholder value capitalism, according to Aglietta and Breton (2001).

The system of corporate governance based on control through debt promotes long-run company growth and is characterized by stable long-run relations among all parties involved in the process, because the creditors also tend to have relatively long-term relations with the firm (as with the traditional German or Japanese style of corporate governance). The other two types impose short-term profitability pressure on the management, and the impact on long-term growth becomes ambiguous (Aglietta and Breton 2001). Direct control through shares may be exercised by majority shareholders, which are usually institutional investors and also have relatively good information about the company. However, unlike banks, institutional investors do not provide long-term finance to the company and are thus less interested in its long-term prospects. Their targets are rather linked to the short-term financial performance of the company, and managers' pay is often linked with the company's financial performance, with other targets being subordinated. Finally, control by the stock market establishes a form of governance conducive to waves of corporate restructuring via mergers and acquisitions. Minority shareholders are very quick to sell or buy shares, and companies are encouraged indirectly – because of the fears of takeover or via incentive-based remuneration – to prioritize dividend distribution and adopt share price maximization over some other target. Dividend distribution, however, undermines accumulation, because the internal means of finance decrease.

In summary, the major characteristic of the finance-led growth regime is the central role played by finance and the shareholder–management alliances, as opposed to the capital–labour compromise, which was a dominant feature of the Fordist regime (Boyer 2000). In the finance-led growth regime, the wage relation is dominated by employment flexibility and wage moderation and an increasing relevance of profit sharing and pension funds for workers' households' income. Increasing financial liberalization intensifies the relationship between finance and the rest of the economy, making the overall economy more volatile and susceptible to financial instability, in turn. Stock market valuation is at the heart of the finance-led regime of accumulation (Boyer 2010), given that here it is the market that dictates the business strategies of companies. The more intense the market for corporate control is, the more the management will be focused on boosting the prices of shares because of fears of takeover (Aglietta and Breton 2001). Higher dividends are paid to maintain the minimum return on equity, and this shrinks the part of profits to be reinvested, ultimately undermining the growth of the firm itself.

1.2.4 Crisis of the Finance-led Growth Regime?

There has been no general agreement among regulation theorists on whether a finance-led accumulation regime is sustainable. Boyer (2000) develops a formal macroeconomic model, which incorporates the features of a finance-led accumulation regime in order to investigate the stability of the short-run equilibrium. Four configurations emerge, and, out of these, two show that an increase in the profitability norm imposed by shareholders on corporations and management can have a positive effect on demand (the so-called ‘fully financialized system’ and ‘paradoxical wage system’). In other words, an accumulation regime is finance-led if an increase in the financial norm leads to higher growth. This happens when the financial markets ‘lead to a generalization of investment behavior determined largely by profitability’ (Boyer 2000, p.127) and when wealth effects on consumption are well developed, generating sufficient aggregate demand and accelerating investment. However, further development of financial markets can take the economy towards the zone of structural instability: There is a threshold beyond which financialization is destabilizing for the macroeconomic equilibrium. Appropriate actions by the central bank, though, can stabilize the system by preventing financial bubbles.²

For the other two types of financialized systems (‘financialized Fordist configuration’ and ‘hybrid financial system’), a rise in the profitability norm produces negative effects. This is usually a characteristic of the systems where the wage is the essential determinant of the mode of consumption (‘an economy still dominated by wage-earning social relations’, Boyer 2000, p. 127). The USA and, to some extent, the UK are the only two countries characterized by a finance-led accumulation regime, according to Boyer.

Although Boyer (2000) shows that it would be theoretically possible, mainly via the wealth effect on consumption, for a higher financial norm to have expansionary effects on the economy, the recent financial crisis originating in the USA may be seen as a structural crisis of this model of growth:

The viability of a finance-led regime has long been a controversy among *regulationist* researchers: some perceived the process of financialization as irreversible (Aglietta 1998), whereas others considered that it was quite specific to the United States and the UK and ultimately bound to enter into a major crisis, as have any previous accumulation regimes (Boyer 2000). Nowadays history has delivered its assessment, and everybody agrees that with the successive bursting of the internet and real estate bubbles, this regime has shown its fragility. (Boyer 2010, p.216, emphasis in the original)

In his more recent paper, Boyer (2013) writes about the ‘transformation of finance’ as the key to understanding the structural and systemic crisis that started in 2007. He identifies three processes of this transformation which acted as the originators of both the boom and the bust. Firstly, increased international competition in the 1960s and the demise of the capital–labour accord replaced the Fordist mass production/mass consumption regime with the finance-led growth regime. Yet this transition was accompanied by an increasing inequality of personal incomes, and in particular by the concentration of financial wealth at the very top of income distribution. Secondly, the dynamism of the new growth regime since the 1980s has rested upon financial innovation and the massive extension of credit to households. Given the moderate growth in real incomes of households, the lack of aggregate demand would have been an immediate obstacle to growth in the absence of debt-driven consumption. Increasing household debt, compensating for stagnating real incomes, exacerbated the fragility of the US economy. Finally, excess credit in the US economy and rising indebtedness of households were related to increasing imports from Asia, and huge capital inflows, from China in particular. This increased the likelihood of spillover effects of a financial crisis to other world regions and created structural imbalances in the world economy. Finance had, in fact, become ‘dysfunctional with respect to recovery of accumulation, growth, and employment’ (Boyer 2013, p. 22). The crisis was triggered by the occurrence of three deflationary processes that froze the US financial system: the bursting of the real estate bubble and the consequent fall in real estate prices which increased the real debt burden of households; the losses experienced by the financial system as a result of the loss in value of mortgage-backed securities; and, as a consequence, an increased risk-averseness of banks and other financial institutions, which stopped giving out credit. These three chain events invoked Irving Fisher’s (1933) debt-deflation theory of depressions; only the immediate responses of governments and, in particular, central banks prevented a serious goods and labour markets deflation.

But is the finance-led growth regime disappearing? The process of cleaning the balance sheets will last for at least a decade, and the accumulation regime of the USA ‘faces a structural block that can no longer be credit led’, according to Boyer (2013, p. 15). Paradoxically, though, even in the aftermath of the financial crisis there appears to be a strong ‘resilience of the power of finance’ (Boyer 2013, p. 17). The major parts of the costs of the crisis have been shifted away from the financial sector and towards the taxpayer. Successful lobbying has prevented any significant attempt at regulation, and the alliance between managers and shareholders – the cornerstone of the mode of regulation in place since the 1980s – has not changed, according to Boyer (2013).

1.3 THE SOCIAL STRUCTURES OF ACCUMULATION (SSA) APPROACH

1.3.1 Basic Structure of the SSA Theory

Similar to the French Regulation School, the Social Structures of Accumulation (SSA) approach examines the interaction of potentially unstable capital accumulation and growth processes with social institutions or ‘social structures’ which ‘tame’ this instability and allow for longer periods of stable and rapid growth. The basic idea is that successful SSAs are finally undermined by endogenous processes within the SSA, which then give rise to systemic crises and – potentially – to a new SSA. The founding fathers of this approach were David Gordon, Michael Reich and Richard Edwards in the 1970s and early 1980s (McDonough et al. 2010).

The SSA stands for the set of institutions which favour investment (accumulation) in a certain period of time. These periods tend to last for several decades, and are thus best described as long waves or stages in the development of capitalism (Lippit 2010). The SSA theory aims to explain the stages of capitalism and describes and analyses the institutional arrangements that prevail in each of these stages. Institutions are to be considered broadly, and describe the specific economic (for instance, competition and organization of markets), political (the ‘presence’ of the government), ideological and cultural (education, religious beliefs, political ideologies) structures, which all reinforce each other during a particular SSA (McDonough et al. 2010). Given the importance of the various institutions in the formation (and the collapse) of any SSA, the construction of a new SSA, which will replace the old one, requires quite a lot of time. This is why periods of stagnation following the demise of an exhausted SSA can be so long-lasting.

Therefore, the relationship between long waves of growth followed by stagnation, observed in the history of capitalism, and changes in the institutional structures are at the core of the SSA approach. Both Marxian and Keynesian features can be found in the basic economic theory. However, unlike orthodox Marxian theory, the SSA approach focuses on the ability of capitalism ‘to reinvent itself’ after a period of prolonged stagnation and/or crisis.

So far in the literature on SSAs, four stages of capitalism in the United States have been described, as can be seen in Table 1.1. In this chapter we will focus on the last two SSAs, namely the post-war, or the regulated capitalist, SSA and the contemporary global neoliberal SSA.

Table 1.1 *SSA theory on the history of capitalism in the United States*

Period	Form	Characteristics
1) Mid- to late nineteenth century	Competitive SSA	Predominantly small and medium-sized firms, dominance of trade in international economic relations, laissez-faire government.
2) Late nineteenth century until the Great Depression	Monopoly SSA	Unions, oligopolistic market structure, US expansion in Latin America, creation of the Fed.
3) End of the Second World War until the 1970s 'Great Stagflation'	Regulated capitalist SSA	Capital-labour accord (strong unions), Keynesian welfare/warfare state, US international dominance, dollar as hegemonic currency.
4) Early 1980s to the present	Global neoliberal SSA	Dominance of capital over labour, separation of the financial from the non-financial sector, globalization, deregulation.

Source: Based on McDonough et al. (2010) and Kotz (2011).

1.3.2 Structural Breaks or Regime Shifts towards Financialization/Global Neoliberal SSA

According to Gordon et al. (1987), the prosperity of the post-war SSA in the USA was due to the following four factors that characterized that period: 1) a balanced capital-labour accord where, on the one hand, the workers were granted job security and rising real wages while, on the other hand, the unions were not strong enough to squeeze out profits; 2) the international hegemony of the USA ('Pax Americana'); 3) the government assured the traditional welfare state provisions, such as health care and social security; and 4) oligopolistic competition and relatively weak foreign economies.

Yet the prosperity came to an end in the 1970s, indicating the demise of the post-war SSA (see Table 1.2). In the SSA literature, the broad agreement appears to be that the cause of the crisis stemmed from the capital-labour relation or, more precisely, the decline in profitability (profit squeeze) due to the loss of power of capital relative to labour in the face of (close to) full employment (Gordon et al. [1994] 1998; Nilsson 1996, 1997; Kotz 2011).

In particular David Gordon, partly together with Samuel Bowles

Table 1.2 The rise and demise of the post-war SSA

Phase	Capital–labour accord	Pax Americana	Capital–citizen accord	Inter-capitalist rivalry
Boom: 1948–66	Cost of job loss rises; workers' resistance down.	US military dominance; terms of trade improve.	Government support for accumulation; profits main state priority.	Corporations insulated from domestic and foreign competition.
Erosion: 1966–73	Cost of job loss plunges; workers' resistance spreads.	Military power challenged; terms of trade hold steady.	Citizen movements take hold.	Foreign competition and domestic mergers begin to affect corporations.
Stalemate: 1973–79	Stagnant economy creates stalemate between capital and labour.	OPEC and declining dollar result in sharp deterioration in US terms of trade.	Citizen movements effect new fetters on business.	Pressure on foreign competition, and domestic rivalry intensifies.

Source: Gordon et al. (1987, p. 51).

and Thomas Weisskopf, focused his attention on the construction of macroeconomic models which incorporate the insights of the post-Second World War SSA and its demise (Gordon 1981, 1995; Gordon et al. 1983, [1994] 1998). The basic feature of the models is the dependence of investment on expected profitability, with the latter being dependent on a constructed index of underlying capitalist power relative to (organized) labour. The main result is that the decline in the underlying capitalist power was the cause of the stagnation of investment during the 1970s and the 1980s, which eventually led to the collapse of the post-war accumulation regime and SSA.

The explanation of the crisis of the post-war SSA ('regulated capitalist SSA') as a crisis of profitability is also the one put forth by Kotz (2011). His idea is that different typologies of SSA will result in different forms of crises. In the case of the post-war SSA, we have a specific set of institutions, which are based on the capital–labour compromise and are ultimately supportive of the workers' position. Interventionist governments promote growth and high employment, labour unions are strong, competition among corporations is fairly restrained, and the financial sector is

engaged mainly in the financing of productive activities of non-financial firms. In this framework of a 'mixed economy' (where the market, state and unions all play an important role), the problem that eventually arises is that of the *creation* of surplus value. There is thus not a problem of inadequate aggregate demand, but rather of decreasing profitability due to a 'loss of power on the part of capital' (Kotz 2011, p. 16). This type of crisis results not in an immediate crash but rather in a prolonged decline marked by a fall in the rate of capital accumulation and in the long-term growth rate, causing rising unemployment. Nilsson (1996) also focuses on the breakdown of the capital-labour accord as an explanation for the crisis of the regulated capitalist SSA. However, in his model the most significant factor causing the stagnation in profitability and investment was the loss of US hegemony.

The deep crisis of the post-war SSA finally gave rise to the 'global neoliberal SSA'. Tabb (2010) identifies four key developments in the regime shift from the post-war SSA to the global neoliberal SSA:

1. Leaps in innovation together with decreased transportation and communication costs led to a re-organization of production with ever expanding business opportunities. Complex production networks and commodity chains have spread internationally as a result of an increasing openness of markets.
2. Developments in information technology (IT) made the use of computerized data processing essential in various risk assessment calculations in the business environment.
3. The collapse of the system of fixed exchange rates (Bretton Woods) gave an impetus for speculation in exchange markets. Overall, financial innovation and derivatives allowed for greater speculation, higher leverage, and expansion of securitization.
4. The shareholder value orientation became the cornerstone of contemporary corporate governance; that is, a transition from manager-dominated capitalism to finance-dominated capitalism occurred.

The contemporary SSA, the 'global neoliberal SSA', began in the USA with the election of Ronald Reagan in 1980. The growth model of the global neoliberal SSA is based on, and dependent upon, finance and financial innovation, according to Tabb (2010, p. 149). In other words, the shift from the post-war SSA to the global neoliberal SSA has the embrace of financialization as its very central feature. It can actually be said that the keywords of the contemporary SSA are: financialization, globalization and neoliberalism.

Table 1.3 Key features of the post-war SSA and the neoliberal SSA

Regulated capitalist SSA (post-war SSA)	Neoliberal SSA
Capital–labour compromise	Capital dominates labour
Interventionist government	Retreat of government
Restrained competition among corporations	Unrestrained competition, price wars
Financial sector serving the non-financial sector	Separation of the financial from the non-financial sector, speculation in the former
‘Mixed economy’	Unrestrained market (neoliberal ideology)

Source: Based on Kotz (2011).

1.3.3 Characteristics of the (Global) Neoliberal SSA

The neoliberal, or global neoliberal, SSA rests upon five key features, described by Kotz (2011). These features in fact appear to be the reverse of what characterized the previous, post-war SSA (Table 1.3). The capital–labour compromise ceased to exist, as such, and was replaced by the increasing dominance of capital over labour, resulting in an increasing gap between the growth of productivity and of real wages. Government activity was reduced, and waves of privatizations and deregulations in various sectors took place. With regard to the capital–capital relation, unrestrained competition, price wars and individualism were brought together under the umbrella of the free market and neoliberal ideology.

Most importantly, whereas in the regulated capitalist SSA the financial sector served the non-financial sector, the neoliberal SSA has seen an increasing separation of the financial from the non-financial sectors, with the former becoming progressively innovative and increasingly in pursuit of speculative profits. The neoliberal SSA has been characterized by increasing gearing ratios (that is, higher indebtedness of corporations), with more ‘fictitious’,³ expectations-dependent capital (Tabb 2010). Crucially, there has been little provision for risk. Securitization and the extensive use of collateralized debt obligations (CDOs) induced large parts of the banking sector to reduce the standards of creditworthiness when granting credit. Finally, increasing debt levels and high leverage ratios undermined the financial stability of the system.

Other important features forming the global neoliberal SSA are globalization of trade and capital movements, as well as off-shoring. With the deregulation of labour markets and free capital movement, multinationals have succeeded in re-defining domestic labour contracts and, addition-

ally, were successful in lobbying for lower taxation of profits. Both battles were fought under the flag of outsourcing (Boyer 2010). From the socio-political point of view, the major feature of the transition was that, following the shift of power towards multinational corporations, the power in both economic and political circles now shifted towards finance capital and financial markets. This is also apparent in that the elected officials or policymakers have not questioned the working of financial markets. Quite the contrary, it was the financial sector that – primarily via its monetary contributions to political candidates and elected officials – has been setting the issues on and/or off the political agenda (Tabb 2010). Over time, the financial industry became dominant over the non-financial sectors of the economy and thus over the production of goods and services.

This shift of power has had serious effects on income distribution. According to Boyer (2010), these developments were the prerequisites for the explosion of CEO remuneration. Managers did not have to respond any longer to workers' demands, but to those made by financial markets. Institutional investors who gained power via financial deregulation and high capital mobility have, since the mid-1980s, put the non-financial corporations increasingly under pressure by imposing their demands for higher rates of return on invested capital. Productive investment, in fact, has become more sensitive to profits than to expected demand, in particular in the USA and the UK, according to Boyer (2010).

The boom of CEO compensation in the period of financialization is seen as a reflection of the alliance of top managers with rentiers/shareholders under the flag of protection of the shareholder. It has not been justified by an unprecedented performance of the firms the CEOs were running. Rather, managers have occupied a unique position in the firm with regard to insider information and special knowledge about the firm. This caused an asymmetry of information between top managers and various boards,⁴ resulting in an alliance between the two – a 'social compromise' (Boyer 2010, p. 231) – where the financiers acknowledge the power of managers, and managers take on the principles of shareholder value.

Tabb (2010) draws attention to the change in the ownership of corporate America: Since the 1980s the major shareholders have been institutional investors and pension funds, whose aim is the maximization of share prices in the short run. These types of shareholders enabled the transformation of *managerial capitalism*, 'understood as integrated unit dedicated to long-term growth' (Tabb 2010, p. 153), towards *finance capitalism*. Increasing dividend payments demanded by shareholders left less money to spend on productive investment or R&D, resulting in non-financial corporations engaging more in financial than in their core business activities.

One of the major consequences of this new social compromise and of

the new practices in the banking sector was massive debt creation in the private household sector. Increasing household debt has been a result of stagnating real wages while the banking sector provided credit to finance consumption by relaxing credit constraints.

1.3.4 Crisis of the Neoliberal SSA – the Consequences of Financialization for Long-Run Development

Kotz and McDonough (2010) outline four factors which, in their view, have been contributing to the collapse of institutions of the global neoliberal SSA. These are:

1. increasing inequality in the distribution of functional income (between capital and labour) as well as personal income (among households);
2. a deregulated financial sector, which engaged massively in highly speculative and risky activities;
3. several asset bubbles preceding, and culminating in, the major housing bubble which burst with dramatic consequences in 2007; and
4. the degree of global economic and financial integration, which contained an increased risk of contagion after the outbreak of a crisis.

Along these lines, in his later work Kotz (2011) analyses the way in which the crisis of the neoliberal SSA manifested itself. He compares it with the demise of the post-war SSA (Table 1.4) and argues that, given the types of unsustainable trends produced by the neoliberal SSA, the crisis needed to be resolved in a sudden collapse, rather than in a long gradual decline, as in the case of the former SSA. The underlying cause of the crisis of the neoliberal SSA is not to be found in a profit squeeze and a falling rate of profit, as in the case of the regulated capitalist SSA, but rather in the weak growth of mass income-financed demand. From 1979 to 2007 the gap between real profits and real employee compensation widened, and ‘in 2000–07 profits rose more than 8 times as fast as compensation’ (Kotz

Table 1.4 The demise of the post-war and of the neoliberal SSA

Regulated capitalist SSA (post-war SSA)	Neoliberal SSA
Crisis of profitability	Crisis of ‘over-investment’
Problem in the creation of surplus value	Problem in the realization of surplus value

Source: Based on Kotz (2011).

2011, p. 11). Inequality of household incomes grew, and was also made more pronounced by the reductions in social provisions.

However, the institutions of the neoliberal SSA were able to postpone the problem of realization of surplus value for several decades. Two features of the neoliberal SSA acted as ‘delayers’ of the collapse immanent in the neoliberal SSA: an increasingly speculative financial sector, and a series of large asset bubbles (Kotz 2011). A surplus of investable funds relative to productive investment opportunities – a consequence of rising inequality – fuelled a series of asset bubbles. These were accommodated by the deregulated, innovative and speculative financial sector. Owing to the wealth effect of increasing asset prices, a large part of the population was able to increase its consumption, notwithstanding slow or absent growth of household incomes.

However, several decades of consumption made possible by increasing indebtedness of households (the household debt to disposable income ratio had begun to increase steadily only since 1979, i.e. during the neoliberal SSA) became unsustainable so that the structural crisis of the neoliberal SSA occurred in 2008–09, after the collapse of the housing price bubble, beginning with a decline in consumer spending (Kotz 2011). The decline in business fixed investment followed afterwards. It appeared that, taking away the debt-financed consumption spending, productive capacities were much in excess of what was needed to satisfy effective demand. The crisis of the neoliberal SSA is thus interpreted as a crisis of over-investment caused by the difficulties in the realization of surplus value against the background of redistribution at the expense of wage incomes.

In other words, large asset bubbles and a deregulated financial system which allowed them to develop, the characteristics of the global neoliberal SSA, were necessary to temporarily ‘resolve’ the problem of weak demand caused by the redistribution of income immanent in this SSA. In practice, consumption was sustained by increasing debt levels. Unlike the crisis of the regulated (post-war) SSA, which was characterized by a longer and slower decline, this crisis occurred with a sudden economic collapse. The outcome was a financial crisis, a collapse in aggregate demand and presumably a long period of stagnation to follow (Kotz 2011).

1.4 POST-KEYNESIAN APPROACHES

1.4.1 Basic Structure

Post-Keynesian economics, that is, the school of thought based on the radical interpretation of John Maynard Keynes’s work by Joan

Robinson, Richard Kahn, Nicholas Kaldor, Paul Davidson and others, as well as on Michal Kalecki's contributions, is built on several principles of a 'monetary theory of production', which distinguish this research programme from the mainstream 'real theories of exchange' as can be found in different modern versions of neoclassical economics (neoclassical synthesis, monetarism, new classical and new Keynesian economics). These post-Keynesian principles can be briefly summarized as follows.⁵ In a monetary production economy, money, credit and monetary interest rates have real effects on distribution, employment and growth, and money and monetary policies are thus not neutral, neither in the short run nor in the long run. The levels of output and employment, as well as the rate of growth, are governed by the 'principle of effective demand', and the major real variables of the economic system are thus demand determined. The society consists of different social groups with different constraints (ownership of wealth and means of production, access to credit), different interests, and different behavioural commonalities within the groups (propensities to consume and to save). Monetary production economies are characterized by the conflict over the distribution of the social product and of national income and by power relationships affecting the outcome of this distribution conflict. Inconsistent distributional claims endowed with respective bargaining powers will generate conflict inflation. Economic and social processes take place in 'historical time', which means that '[t]oday is a break in time between an unknown future and an irrevocable past' (Robinson 1962, p. 26). Expectations under the conditions of 'fundamental uncertainty' regarding future events have therefore an important role to play when it comes to present economic behaviour, as do institutions, which emerge in order to cope with uncertainty. Post-Keynesian theories and models are thus historically and institutionally specific, and do not claim general and global validity. Model results ('equilibria' or, better, 'temporary states of rest') are not pre-determined by some general, ahistorical and exogenous structural factors, but are historically and institutionally specific, and they are 'path-dependent', being generated by the economy proceeding through 'historical time'. Furthermore, post-Keynesian models show that there are all sorts of fallacies of composition in monetary production economies. Individually purposeful, reasonable or 'rational' microeconomic behaviour may systematically generate unintended and counter-intuitive results at the level of the macroeconomy: the 'paradox of thrift' (Keynes [1936] 1973), the 'paradox of costs' (Rowthorn 1981), the 'paradox of debt' (Steindl [1952] 1976) and the 'paradox of tranquility (stability)' (Minsky 1975) are the most prominent examples.⁶ Finally, post-Keynesians hold that monetary production economies are struck

with systemic instabilities and therefore require permanent stabilization policies in the short and in the long run.

From these basic principles it follows that, from a post-Keynesian perspective, institutions, ‘the rules, laws, and customs that define acceptable social behaviour’ (Cornwall and Cornwall 2001, p. 8), and power relationships are of utmost importance for the functioning of capitalist economies. Institutions are important in several respects (Pressman 2012). They are required to cope with fundamental uncertainty – money as a social construct and contracts as well as contract- and payment-enforcing institutions are important in this respect (Davidson 1988, 1994, Chapter 6).⁷ Institutions are required to provide a stable monetary and financial system on both national and international levels. Institutions are important for containing and moderating the distribution conflict and preventing accelerating conflict inflation as an outcome of an unresolved distribution conflict, on the one hand, and macroeconomically dysfunctional redistributions, on the other hand. Therefore, appropriate labour market and wage bargaining institutions are particularly important for macroeconomic performance, but there are also other institutions affecting distributional struggle, for example central banks, as Palley (1996) and Setterfield (2007) have analysed for the USA and Hein (2002) for the Euro area.

Since monetary production economies are demand constrained in the short and in the long run, those institutions affecting private consumption and investment expenditure are of importance for short- and long-run economic performance, as are the institutions and regulations of government stabilization policies. Regarding the ability and the willingness to consume, institutions affecting income distribution and the degree of uncertainty of future income flows, as well as social norms affecting consumption expenditures, are important. Regarding investment, institutions affecting uncertainty with respect to future costs (wages, interest rates, exchange rate) and sales, and regulating access to the required means of finance seem to be most relevant. Finally, monetary and fiscal policies are important with respect to the determination of aggregate demand, output, employment and growth, both in the short and in the long run (Arestis and Sawyer 1998; Hein and Stockhammer 2010; Arestis 2013).

1.4.2 Structural Breaks and/or Regime Shifts towards Neoliberalism, Financialization or Finance-dominated Capitalism

Post-Keynesian explanations of regime shifts towards financialization/finance-dominated capitalism or neoliberalism start with the analysis of the conditions for the ‘Golden Age’ period of the 1950s, 1960s and early 1970s, which provided high growth of output, investment and

productivity, (close to) full employment and low inflation in the major capitalist economies. Cornwall and Cornwall (2001, Chapter 9) consider the 'social bargain' between capital, labour and the state as the very foundation of the 'Golden Age' in their evolutionary-Keynesian analysis. This was based on a long-run shift of political power towards social democratic and labour parties and of economic power towards trade unions, which had already started after the First World War, and was supported by the experience of the Great Depression and the following Second World War, as well as by the spread and broad acceptance of economic policy concepts based on Keynesian economics. Governments accepted full employment as a goal to be achieved by appropriate aggregate demand management and provided the institutional conditions for collective bargaining between employer associations and trade unions. The labour movement and the trade unions gave up the goal of overthrowing capitalism in exchange for full employment, social safety and increasing real wages. And capitalists accepted government intervention and labour's participation in productivity gains in exchange for keeping control over the firms and continuing exercising management functions. Cornwall and Cornwall (2001, p. 182) distinguish a 'social bargain group' of countries, consisting of Japan, Germany, France, Australia, Austria, Belgium, Denmark, Finland, the Netherlands, New Zealand, Norway, Sweden and Switzerland, from a 'market power group', containing the USA, the UK, Canada, Italy and Ireland. On average, over the period between 1960 and 1973, the two groups witnessed roughly equal rates of inflation, but the 'market power group' needed a much higher rate of unemployment in order to contain inflation than the 'social bargain' group.

Although, according to Cornwall and Cornwall (2001, pp. 169–170), the USA did not have a 'social bargain' at the national level, it acted as an international hegemon providing the international environment for high employment, high growth and low inflation in the 'social bargain' countries: the Bretton Woods system with fixed but adjustable exchange rates, the International Monetary Fund (IMF) and the World Bank, the General Agreement on Tariffs and Trade (GATT), and the European Recovery Program (Marshall Plan). In sum, these institutions established conditions such that the major constraints on employment and growth in many countries could be removed during the 'Golden Age' period:

- the demand constraint through active government demand management and real wages growing in line with productivity;
- the supply constraint through re-integration of demobilized soldiers, re-allocation of labour from agriculture to industry, increases in female labour participation, migration, and technology transfer

from the USA, which facilitated productivity in other countries to catch up;

- the inflation constraint through the ‘social bargain’ between labour, capital and the state, making target real wages grow in line with productivity, thus avoiding conflict inflation;
- the balance of payments constraint, in particular through capital transfers from the USA to Europe related to the European Recovery Program, the establishment of the European Payments Union dealing with intra-European imbalances, and later increased US military spending abroad; and
- the political constraint, because of the general acceptance of ‘Big Government’ and the absence of large government deficits and debt.

According to Cornwall and Cornwall (2001, Chapter 11) the ‘Golden Age’ crumbled because of the endogenous erosion of its most important institutional foundation, the ‘social bargain’ in several ‘social bargain’ countries:⁸ ‘Persistent low unemployment and rising living standards not only had increased labour’s power, but had generated the belief that low unemployment and rising living standards were the norm. Anticipating continued growth and employment, people’s aspirations rose, and their demands grew faster than the economy’s ability to satisfy them’ (Cornwall and Cornwall 2001, p. 227).

Wage aspirations not backed by productivity growth caused rising inflation rates, in both ‘social bargain’ and ‘market power’ countries, and made the inflation constraint binding again. Governments sacrificed full employment targets in favour of low inflation and international price competitiveness. The collapse of the Bretton Woods system in the early 1970s contributed to the end of the ‘Golden Age’, as did the deregulation of capital markets and the acceleration of economic and financial globalization in the 1970s and 1980s, which each contributed to reducing labour’s bargaining power. A further contribution was the collapse of the Soviet Union in the late 1980s, which relieved business and governments of their fear of socialism. These developments led to the rise of neoliberalism starting in the mid-1970s replacing the ‘Golden Age’ institutions: ‘Neoliberalism is a regime characterized by reduced government intervention, the deregulation of markets, cutbacks in the welfare state, and price stability as its overriding macroeconomic goal’ (Cornwall and Cornwall 2001, p. 252).

In the neoliberal regime, the political constraint to full employment becomes binding again, enforced by institutional changes increasing the relative economic power of business. Central bank independence and constitutional amendments requiring balanced government budgets are the

most prominent ones. However, the neoliberal regime suffers from severe problems and contradictions questioning the political and economic stability of the system, under the conditions of high unemployment, widespread poverty and increasing inequalities in the distribution of income.

Whereas Cornwall and Cornwall (2001) focus on the 'social bargain' and the transition from the 'Golden Age' constellation towards neoliberalism without explicitly mentioning the role of finance and financialization, Josef Steindl's ([1979] 1990, [1989] 1990) earlier long-run analysis takes a broader perspective regarding those factors explaining the rise and the fall of the 'Golden Age', on the one hand, and explicitly addresses those forces leading to the dominance of finance, on the other hand.⁹ In Steindl ([1979] 1990) we find four reasons for high growth and low unemployment in the post-Second World War period:

1. Public spending increased tremendously after the Second World War, financed to a great extent by taxes on profits. This increased capacity utilization and fed back positively on firms' decisions to invest in capital stock.
2. Technological competition between East and West, the 'competition of the systems', had a strong impact on expenditures on R&D and education by governments, which spilled over to the private sector, boosting investment and productivity growth.
3. The post-war tensions triggered close cooperation between Western countries under the leadership of the USA. This included the world financial system of Bretton Woods, the Marshall Plan and American lending to Western European countries, which stabilized and provided the conditions for an increase in international trade. A higher level of international trade kept profit margins within limits and contributed to stabilizing wage shares.
4. European countries benefited from technological backwardness with respect to the USA and could make use of technological knowledge which had been generated and applied in the USA, thus making use of the 'catching-up' factor in economic growth.

Steindl ([1989] 1990) also mentions the low indebtedness of corporations right after the Second World War as a factor favourable to investment in capital stock and to GDP growth, as well as increasing the bargaining power of workers and trade unions associated with full employment which held mark-ups and profit shares in check and allowed for real wages to grow in step with productivity, thus providing the required demand growth.

Steindl ([1979] 1990) relates the causes of stagnation starting in the early

or mid-1970s to the reduction of tensions between the superpowers, an increase in internal rivalries among the capitalist economies, a decay of US leadership and the collapse of the Bretton Woods international financial system, indicating the absence of the willingness and the ability for international cooperation. Further factors contributing to the re-emergence of stagnation were: the tendencies towards increasing capital productivity, reducing the required amounts of net investment to increase productive capacities; a trend towards an increasing marginal propensity to save from disposable income in prospering economies, weakening aggregate demand, capacity utilization, investment and growth; the fading out of the catching-up potential of Europe towards the USA associated with abnormally high rates of productivity growth in Europe over the post-war period; and increasing environmental and energy problems, with rising energy prices putting upward pressure on inflation rates and raising uncertainty with respect to future technological development.

However, the most important factor explaining the re-emergence of stagnation tendencies, according to Steindl ([1979] 1990), is 'stagnation policy' in the major capitalist economies. In this context, Steindl ([1979] 1990) refers to Kalecki's (1971, Chapter 12) 'Political Aspects of Full Employment', in which Kalecki argued that, although governments might know how to maintain full employment in a capitalist economy, they will not do so, because of capitalists' opposition. Whereas in Kalecki (1971, p. 144) the opposition of the capitalist class towards full employment policies will give rise to a 'political business cycle', Steindl ([1979] 1990, p. 9) argues that business opposition towards full employment policies gives rise to a 'political trend' causing or contributing to stagnation. In the course of the 1970s, governments, facing full employment and increasing rates of inflation, moved away from targeting full employment by means of active demand management towards targeting price stability and containing public deficits and debt, using higher rates of unemployment as an instrument.

In Bhaduri and Steindl (1985) these policies are associated with 'the rise of monetarism as a social doctrine', because monetarism is inherently linked with restrictive fiscal and monetary policies, which are supported by banks and the financial sector (or the rentiers). The application of monetarist policies thus indicates a shift of powers from industry to banks, or from the non-financial sector to the financial sector, which occurred in the course of national and international financial liberalization, as well as rapidly increasing financial activity in the 1970s and early 1980s (collapse of the Bretton Woods international financial system, rise of the eurodollar market, emergence of oil exporting countries to a class of 'international rentiers', emergence of international commercial banks). Starting in the

1980s, the tendencies towards stagnation and weak investment in capital stock have been amplified by an interest shift of corporations and their managers from production towards finance, and an increasing role of financial investment in comparison to real investment (Steindl [1989] 1990).

Smithin (1996) has explicitly analysed the rise and the fall of the 'Golden Age' in terms of the interests and power constellations of three social groups: business, labour and rentiers. The 'Golden Age' period is explained by a social compromise, in which aggregate demand, output and employment growth were sustained by economic policies inspired by Keynesian ideas, real wages grew in line with productivity growth, and real interest rates were kept at low levels by the monetary authorities, thus stimulating economic activity in production: 'This provided the space in which both "big business" and "big labour" could grow and prosper' (Smithin 1996, p. 5). What was important for this overall social compromise, according to Smithin (1996), was that real interest rates were kept low but remained positive, so that rentiers could at least maintain the 'real' value of their financial wealth.

This social compromise was shattered when, in the face of rising inflation rates due to an overheated US economy during the Vietnam War in the late 1960s and the oil price shocks of the early 1970s, central banks allowed real interest rates to turn negative during the 1970s. Although negative real interest rates are favourable for the actors in the real economy as borrowers, and thus for industrial capitalists and workers, they undermine the consent of the rentiers as lenders because their accumulated financial wealth is depreciated. This is what then caused a political revolution in the late 1970s, the 'Revenge of the Rentiers', 'the most important feature of which was the "capture" of central banks by rentier interests, and their conversion thereafter to exclusively "hard money", high interest, and anti-inflation policies' (Smithin 1996, p. 5).¹⁰ Monetarism and an exclusive focus of economic policies on low inflation rates, balanced government budgets and stable exchange rates at the expense of aggregate demand management targeted towards full employment became the generally accepted doctrines, with the ultimate purpose of re-establishing positive real rates of return on financial capital. The major events were the appointment of Paul Volcker as chair of the US Fed in 1979 and the concomitant tight monetary policies in the USA, the election of Margaret Thatcher as British prime minister in 1979, which marked the start of draconian anti-inflation policies in Britain, and the establishment of the European Monetary System (EMS) with its exchange rate mechanism (ERM), which linked the central bank policies of member countries to the hard-line anti-inflation policy of the German Bundesbank.

This regime switch was successful in bringing down inflation, increasing real interest rates and initiating redistribution at the expense of labour. But it meant two policy-induced recessions in the early 1980s and the early 1990s, high unemployment and sluggish growth, in particular during the 1980s. According to Smithin (1996, p.84) this points to a potential problem or contradiction in this regime, because ‘policies designed to benefit the already-rich and the financial sector, when pushed to their logical conclusion, simply end up depressing the real economy on which everybody’s livelihood ultimately depends’.

1.4.3 Characteristics of Finance-dominated Capitalism

Post-Keynesian contributions have focused on the ‘macroeconomics of financialization’, in particular. These contributions are based on detailed empirical case studies of the development of financialization, and include, for example, the contributions in Epstein (2005b), and by Krippner (2005) and Palley (2008, 2013, Chapter 2) for the USA, by van Treeck et al. (2007) and van Treeck (2009a) for Germany as compared to the USA, and by Stockhammer (2008) for Europe. Furthermore, the post-Keynesian macroeconomics of financialization can rely on some post-Keynesian and other ‘microeconomic’ contributions on the theory of the firm under the conditions of financialization, by Crotty (1990), Stockhammer (2005–06) and Dallery (2009), for example, and more recently on the effects of norms etc. (conspicuous consumption, ‘keeping up with the Joneses’) on household consumption behaviour by Cynamon and Fazzari (2008), Iacoviello (2008), Frank et al. (2014) and others.

As outlined in Hein and van Treeck (2010) and Hein (2012, Chapter 1) and explained in more detail by Hein and Dodig in Chapter 2 of this book, from a post-Keynesian macroeconomic perspective, finance-dominated capitalism can be characterized by the following elements:

1. With regard to distribution, financialization has been conducive to a rising gross profit share, including retained profits, dividends and interest payments, and thus a falling labour income share, on the one hand, and to increasing inequality of wages and top management salaries and thus of personal or household incomes, on the other hand. Hein (2013) has recently reviewed the evidence for a set of developed capitalist economies since the early 1980s and finds ample empirical support for falling labour income shares and increasing inequality in the personal/household distribution of market incomes with only a few exceptions, increasing inequality in the personal/household distribution of disposable income in most of the countries, and an increase

in the income share of the very top incomes, in particular in the USA and the UK, but also in several other countries for which data are available, with rising top management salaries as one of the major driving forces. Reviewing the empirical literature on the determinants of functional income distribution against the background of the Kaleckian theory of income distribution, it is argued that features of finance-dominated capitalism have contributed to the falling labour income share since the early 1980s through three main channels: falling bargaining power of trade unions, rising profit claims imposed in particular by increasingly powerful rentiers, and a change in the sectoral composition of the economy in favour of the financial corporate sector.

2. Regarding investment in capital stock, financialization has caused increasing shareholder power vis-à-vis firms and workers, a demand for an increasing rate of return on equity and bonds held by rentiers, and an alignment of management with shareholder interests through short-run performance-related pay schemes, such as bonuses, stock option programmes and so on. On the one hand, this has imposed short-termism on management and has caused decreasing management animal spirits with respect to real investment in capital stock and long-run growth of the firm and increasing preference for financial investment, generating high profits in the short run. On the other hand, it has drained internal means of finance available for real investment purposes from non-financial corporations, through increasing dividend payments and share buybacks in order to boost stock prices and thus shareholder value. These 'preference' and 'internal means of finance' channels should each have had partially negative effects on firms' real investment in capital stock. Econometric evidence for these two channels has been supplied by Stockhammer (2004), Orhangazi (2008), van Treeck (2008) and Onaran et al. (2011), confirming a depressing effect of increasing shareholder value orientation on investment in capital stock, in particular for the USA but also for other countries, such as the UK and France. In these studies either interest and dividend receipts or interest and dividend payments of non-financial firms are used as indicators for the degree of financialization.
3. Regarding consumption, financialization has generated an increasing potential for wealth-based and debt-financed consumption, thus creating the potential to compensate for the depressing demand effects of financialization, which were imposed on the economy via redistribution and the depressing impact of shareholder value orientation on real investment. Stock market and housing price booms have each increased notional wealth against which households were willing to

borrow. Changing financial norms, new financial instruments (credit card debt, home equity lending) and deterioration of creditworthiness standards, triggered by securitization of mortgage debt and the ‘originate and distribute’ strategies of commercial banks, made increasing credit available to low-income, low-wealth households, in particular. This allowed for consumption to rise faster than median income and thus to stabilize aggregate demand. But it also generated increasing debt–income ratios of private households. Several studies have shown that financial and housing wealth is a significant determinant of consumption, in particular in the USA, but also in countries like the UK, France, Italy, Japan and Canada (Ludvigson and Steindel 1999; Mehra 2001; Boone and Girouard 2002; Onaran et al. 2011). Furthermore, Cynamon and Fazzari (2008), Barba and Pivetti (2009), Guttmann and Plihon (2010) and van Treeck and Sturn (2012) have presented extensive case studies on wealth-based and debt-financed consumption, with a focus on the USA.

4. The liberalization of international capital markets and capital accounts has allowed for rising current account imbalances at the global but also at the regional levels, for example within the Euro area, as has been analysed by several authors, including Horn et al. (2009b), UNCTAD (2009), Hein (2012, Chapter 6), Hein and Mundt (2012) and van Treeck and Sturn (2012). Simultaneously, it created the problems of foreign indebtedness, speculative capital movements, exchange rate volatilities and related currency crises (Herr 2012).

1.4.4 Financialization and Long-Run Development

Based on the ‘stylized facts’ of financialization outlined in the previous section post-Keynesians have presented different models examining the long-run growth and stability effects of financialization, as reviewed in Hein and van Treeck (2010) and Hein (2012), and also by Hein and Dodig in Chapter 2 of this book.¹¹ Depending on the values of the model parameters, ‘finance-led growth’ regimes, as suggested by Boyer (2000), ‘profits without investment’ regimes, as found by Cordonnier (2006), or ‘contractive’ regimes may emerge. Only in the ‘finance-led growth’ regime is increasing shareholder power overall expansive with respect to the rates of capacity utilization, as an indicator for aggregate demand, profit and capital accumulation, as an indicator for growth, whereas in the ‘profits without investment’ regime the effects on the rates of capacity utilization and profit remain expansive but capital accumulation gets depressed, and in the ‘contractive’ regime there is a depressing effect on all three endogenous variables of the model. As shown in Hein (2012, Chapter 3), only

the ‘finance-led growth’ regime yields long-run stability of the financial structure of the firm sector and of capital accumulation. This regime, however, requires a very special parameter constellation: only weakly negative effects of increasing shareholder power on management’s animal spirits regarding real investment in capital stock, a low rentiers’ propensity to save out of current income, a low profit share, a low elasticity of investment with respect to distributed profits and internal funds, and a high responsiveness with regard to capacity utilization (and to Tobin’s q in some models). In particular, a long-run increase in the gross profit share associated with financialization may turn the stable financial structure into an unstable one. More realistic parameter constellations, giving rise to ‘profits without investment’ or ‘contractive’ regimes, turned out to yield cumulatively unstable long-run results regarding the financial structure of the firm sector and the rate of capital accumulation. In the face of rising shareholder power, a rising rentiers’ rate of return, that is, increasing dividend rates and/or interest rates, and falling management animal spirits regarding investment in capital stock, these regimes are prone to systemic instability characterized by increasing outside finance–capital ratios, that is, rising debt plus rentiers’ equity–capital ratios, and falling goods market equilibrium rates of capital accumulation. Falling labour income shares triggered by financialization increase the likelihood of these unstable regimes. Therefore, under the conditions of the ‘contractive’ and the ‘profits without investment’ regimes, there exists a considerable systemic long-run instability potential regarding the financial structure of the corporate sector of the economy and regarding capital accumulation.

‘Profits without investment’ regimes, as the regimes which empirically seem to have prevailed during the pre-2007 crisis financialization period (van Treeck et al. 2007; van Treeck 2009a, 2009b; Hein 2012, Chapter 6; Hein and Mundt 2012; van Treeck and Storn 2012), can be driven by flourishing consumption demand, by rising export surpluses or by government deficits, each compensating for falling investment in capital stock. This is so because, from a macroeconomic perspective, the following equation, derived from national income accounting, has to hold, as pointed out by Kalecki (1971, p. 82):

$$\text{Gross profits net of taxes} = \text{Gross investment} + \text{Capitalists' consumption} + \text{Government budget deficit} + \text{Export surplus} - \text{Workers' saving} \quad (1.1)$$

Empirically, several countries, like the USA, the UK, Spain, Ireland and Greece, have relied on a ‘debt-led consumption boom’ type of development in the face of low investment in capital stock and redistribution at

the expense of labour incomes, making use of the increasing potential for wealth-based and debt-financed consumption generated by financialization, as analysed by Hein (2012, Chapter 6), Hein and Mundt (2012) and van Treeck and Sturn (2012), for example. As has been shown in the models by Dutt (2005, 2006), Bhaduri et al. (2006), Bhaduri (2011a, 2011b) and Hein (2012, Chapter 5), reviewed by Hein and Dodig in Chapter 2 of this book, increasing credit to (workers') households may indeed be expansionary for consumption, aggregate demand (and hence profits) and growth in the short run, and the system will thus be debt-led. However, in the long run, a rising stock of debt and hence rising interest payments, and therefore redistribution of income, from debtor households with high propensities to consume to rentiers with low consumption propensities, have to be taken into account. Under certain conditions, these contractionary effects may over-compensate for the expansionary effect of higher credit, and the system may become debt-burdened in the long run. Furthermore, it has been shown that, as soon as households' debt-income ratios exceed some threshold values, this ratio itself will become unstable – as a macro-economic effect of weakened standards of creditworthiness, for example.

Turning to the international dimension of financialization, 'profits without investment' regimes can also be driven by net exports and current account surpluses, as equation (1.1) shows. In the face of redistribution at the expense of (low) labour incomes, stagnating consumption demand and weak real investment, 'mercantilist export-led' strategies, relying on nominal wage moderation and suppressed domestic demand, are thus an alternative to generating aggregate demand. This type of development was found in countries like Austria, Belgium, Germany, the Netherlands, Sweden, Japan and China during the pre-2007 crisis financialization period (Hein 2012, Chapter 6; Hein and Mundt 2012; van Treeck and Sturn 2012). Since the 'debt-led consumption boom' economies were running increasing current account deficits, the 'mercantilist export-led' economies with increasing current account surpluses were the necessary counterpart at the global level. The financial crisis, which was triggered by over-indebtedness problems of private households in the leading 'debt-led consumption' economy, the USA, could thus quickly spread to the 'export-led mercantilist' economies through the foreign trade channel (collapse of exports) and the financial contagion channel (devaluation of financial assets), in particular.

Based on these analyses of the long-run effects of financialization on income distribution, capital accumulation, consumption and current account imbalances, post-Keynesian and other authors have argued that these developments, together with the liberalization and deregulation of national and international financial markets, should be considered to be

the main causes of the global financial crisis and the Great Recession of 2007–09 (Fitoussi and Stiglitz 2009; Horn et al. 2009a, 2009b; UNCTAD 2009; Wade 2009; Palley 2010, 2012, 2013; Stockhammer 2010a, 2010b, 2012a, 2012b; Hein 2012). Focusing on developments in the financial sector, as in the following section dealing with Minsky's theory of money manager capitalism, is therefore necessary, but not sufficient, when it comes to providing a convincing explanation for the crisis of finance-dominated capitalism.

1.5 MINSKY'S MONEY MANAGER CAPITALISM

1.5.1 Basic Structure of Minsky's Approach: 'Stability Breeds Instability'

Following Keynes ([1936] 1973), Minsky (1975, [1986] 2008) rejected the neoclassical optimal market equilibrium hypothesis; instead, he argued that capitalist systems experience temporary states of relative tranquillity, in which, however, internally destabilizing forces operate and finally render the system unstable. These destabilizing forces derive from financial relations. Finance and financial relations are not by-products of economic development which may become important in certain stages or regimes, but are important and significant aspects of capitalism as such. Tranquillity in a capitalist economy, where firms operate with external finance, encourages increasing risk-taking and speculative behaviour, initially validated by the institutional structure, but finally generating deep crises and collapses: 'However, success breeds daring, and over time the memory of past disaster is eroded. Stability – even of an expansion – is destabilizing in that more adventuresome financing of investment pays off to the leaders, and others follow' (Minsky 1975, p. 127).

In Minsky's 'financial instability theory', investment is both the driving force and the most unstable component of aggregate demand. Investment decisions are made in a multiple period model. Previous investment and output decisions are validated by current investment based on expectations about future demand (and hence investment). This is so because Minsky, following Kalecki (1954) and – as a simplification – assuming that capitalists do not consume and workers do not save, holds that aggregate gross profits for the economy as a whole are determined by capitalist investment. Therefore, 'in a capitalist economy investment takes place now because it is expected that investment will take place in the future' (Minsky [1986] 2008, p. 146).

Since investment is partly externally financed by credit from banks or other financial intermediaries or by issuing bonds or selling equities, the

volume of investment is affected by the assessment of lenders' and borrowers' risks (Minsky [1986] 2008, Chapter 8). Both of them are rising with the volume of investment and hence of external finance, and are thus restricting investment at a moment in time. However, if expectations regarding future yields associated with current output and investment decisions are fulfilled, lenders and borrowers, that is, rentiers and firms, are willing to reassess lenders' and borrowers' risks. They will reduce the margins of safety and will be willing to take more risk and thus to increase the level of external finance of investment projects and hence the indebtedness of the firm sector. This will increase the fragility of the financial system.

The fragility of the financial system is affected by the share of external finance in investment financing, by the liquidity in the system and by the relative proportions of 'hedge', 'speculative' and 'Ponzi' financing schemes in the system, as Minsky ([1986] 2008, Chapter 9) explains. Hedge financing is seen as the most stable scheme, because expected income allows both the interest and the principal to be paid back. Speculative finance means that investors expect to pay interest from future revenues but not the principal. They have to roll over debt and speculate for (further) rising asset prices. Ponzi finance means that investors do not expect revenues to be sufficient to pay interest, which means that they will have to rely on an increase in future debt in order to meet their payment commitments. If, during the period of tranquillity or stability (during an economic upswing), margins of safety are reduced, lenders' and borrowers' risks are scaled down, hedge units might turn into speculative units and speculative units might become Ponzi units, thus increasing the financial fragility of the whole system. External shocks in relatively small segments of the system are then sufficient to cause a general financial crisis and a collapse of the financial system, which requires the intervention of governments and central banks on a large scale in order to stop economic contraction and debt deflation processes.

Minsky's financial instability hypothesis can be seen as a theory not only of short-run cyclical fluctuations, but also of super-cyclical tendencies, which generate deep crises of the system.¹² Minsky (1995, p. 92) summarized this as follows:

Over a timespan without a financial panic and a deep recession, the financial structure changes so that financial layering increases and the proportion of what I called speculative and Ponzi financial postures increase. The above can be called the first postulate of the Financial Instability hypothesis. The second postulate is that the increase in layering and the shift in the structure of payment commitments progressively increase the vulnerability of the financial system to a debt deflation process, which can usher in a deep depression business cycle.

However, the notion that ‘stability generates instability’ can be not only applied to explain deep financial crises, but also can be used as an approach towards the long-run succession of different financial regimes, as will be discussed next.

1.5.2 Structural Shifts towards ‘Money Manager Capitalism’

According to Minsky, the economic system goes through ‘stages’ of capitalism, characterized by different institutional constellations and financial structures (Minsky 1996; Wray 2009a, 2009b; Tymoigne and Wray 2014, Chapter 2). After each recession, the system resurges with a new set of features, instruments and behavioural patterns which mark a change in a capitalist regime. Minsky ([1986] 2008) based his analysis on the US economic transitions; it is, however, also relevant for the global economy, as it has passed through similar transformations and in the course of globalization contributed to the tightening of international financial interrelations.

According to Minsky, the beginning of the twentieth century was marked by a shift from ‘commercial capitalism’ with its traditional commercial banking structure to ‘early finance capitalism’ during which investment banking started gaining momentum (Wray 2009a, 2009b). Debt financing was no longer obtained solely for trade, but to finance the purchase of expensive capital assets. The use of riskier practices resulted in the stock market collapse in 1929 and the ensuing years of the Great Depression. Major government and lender of last resort interventions, the New Deal reforms and massive military expenditures in the Second World War were needed to reboot the economy and steer it toward prosperity. This period is referred to as ‘paternalistic capitalism’ (Minsky and Whalen 1996; Wray 2009a, 2009b). The major features were: ‘Big Government’, that is, the increasing role of the public sector in economic activity, expansion of the social welfare system and counter-cyclical fiscal policies in order to stabilize the economy; government supervision and regulation of the financial system and guarantees of the monetary system (i.e. deposit insurance); ‘Big Bank’, that is the Federal Reserve system setting low short-term interest rates, stabilizing the financial system and acting as lender of last resort; buoyant consumer demand financed by increases in income; and post-depression reluctance to borrow, and hence a lesser role for the financial sector. In this period government deficits were increasing, in particular during the Second World War, but private sector balance sheets came out of the recession and the war with modest debt ratios, promising a sustainable future development (Minsky [1986] 2008, Chapter 4).

As this stable growth was believed to go ahead, uncertainty became a

lesser concern, and following the pattern described in subsection 1.5.1 this encouraged financial innovation and risk-taking. The government continued to play a sizable role, but the same became true for large financial players such as investment and commercial banks and pension and mutual funds. The late 1960s and early 1970s marked a new stage in economic development – the transition towards ‘money manager capitalism’ with its increased riskiness, financial innovation, profit-seeking behaviour and growing leverage ratios:

Capitalism in the United States is now in a new stage, *money manager* capitalism, in which the proximate owners of a vast proportion of financial instruments are mutual and pension funds. The total return on the portfolio is the only criteria used for judging the performance of the managers of these funds, which translates into an emphasis upon the bottom line in the management of business organizations. It makes the long view a luxury that only companies which are essentially owned by a single individual and which are not deeply dependent upon external financing can afford. (Minsky 1996, p. 1, emphasis in the original)

A widespread use of new position-making instruments, such as certificates of deposit (CDs), repurchase agreements, and borrowing in eurodollars enabled commercial banks to evade the Fed’s reserve requirements, and hence adjust the volume of lending to their liking (Minsky [1986] 2008, Chapter 4). The institutional structure of commercial banking evolved as well; the emergence of fringe banking institutions, whose lenders of last resort were large banks, facilitated further detachment of the Fed from the de facto credit supply. This complex financial structure failed for the first time during the 1966 credit crunch; the lender of last resort stepped in, and prevented a recession, but validated risky practices (Minsky [1986] 2008, Chapter 4).

The 1970s decade was marked by a series of similar crises – the liquidity squeeze of 1970 and bank runs in 1974–75. The pattern was always more or less the same: higher leverage and riskiness, recession, the Fed’s intervention to prevent asset prices from collapsing, and government running deficits to contain falling demand and business profits. Financial failures predictably influenced the real economy; growing unemployment, inflation and a permanent threat of debt deflation marked the end of the ‘Golden Age’ and became intrinsic features of the USA and global economy (Minsky [1986] 2008, Chapter 4).

The next step occurred in the 1980s with a decline in the importance of commercial banks and a simultaneous rise of financial markets. Commercial banks’ profitability was squeezed after anti-inflationary policies implemented by Paul Volcker in 1979–80; furthermore, the tightly

regulated banking system did not offer the perks of financial markets, where funds could be obtained at a lower cost. Together with financial globalization, these developments facilitated the widespread use of securitization techniques, which since then have become the bread and butter of financial institutions. As commercial banks have obtained the opportunity to resell their loans as an asset to investment banks, they no longer had to evaluate risks and stick to capital requirements; their primary aim became to give out as many loans as possible (Wray 2009a).

The elimination of the Glass–Steagall Act in 1999 put an end to functional separation of different types of banking, making it even easier for financial institutions to earn profits. The development of futures markets was responsible for the financialization of new sectors; in particular, severe social and economic implications were caused by commodities price hikes, which had little to do with real terms. Low interest rates and increased competition on financial markets resulted in rising credit availability and leverage, profit-seeking and financial innovation (Wray 2009a).

1.5.3 Characteristics of Money Manager Capitalism

As Wray (2009a, p. 55) argued, money manager capitalism is dominated by ‘highly leveraged funds seeking maximum returns in an environment that systematically under-prices risk’. The definition highlights the main features of the system: the increased role of credit, concentration of financial and market power, and the moral hazard effect of short-term-oriented activities (Minsky 1996).

Financialization has provided generous opportunities for profit making by means of ‘speculative finance’. The rise of financial markets starting in the 1980s opened access to cheaper financing for firms, and the US low interest rate policies in the 2000s combined with competition among banks made it even more affordable (Wray 2009a). In speculative and Ponzi dominant regimes, new borrowing is necessary to repay previous debt or even to pay interest (Minsky [1986] 2008, Chapter 3). The shareholder value model generated high and a constantly rising trend of share and asset prices, which in turn induced further lending. Securitization and globalization of financial markets created a dense and highly interrelated network of financial institutions, funds and enterprises with common interests, while the age of financial innovation when capital assets can be easily financed and traded allowed for speculative growth of asset prices (Wray 2009b). This ‘snowball effect’ tends to erase the real foundations of economic growth, pushing the system towards fragility and susceptibility to price bubbles.

Reduced supervision is predictably disastrous for a financial system

ruled by myopic profit-oriented agents and creates fertile ground for unscrupulous behaviour. With rising revenues from investment trading, fraud has become a widespread practice. Share price manipulations, betting against debts of large enterprises and whole governments, speculative raids detached from any real macroeconomic indicators – all of this has contributed to the series of economic crises starting from the 1970s (Wray 2009b).

The rise of finance and concentration of market power in the hands of ‘too big to fail’ institutions have resulted in a paradoxical economic constellation of a self-regulated financial system and anti-laissez-faire state policies. In a money manager capitalist state, the regulatory role of ‘Big Government’ has become passive and downsized. However, in the case of an economic downswing, the government inevitably has to step in and become the ultimate stabilizer of aggregate demand (Wray 2009b).

Similar tendencies can be observed with respect to the lender of last resort functions of the ‘Big Bank’. With the replacement of the Fed’s traditional discount window by open-market operations, commercial banks were freed from senior influence and could therefore engage in more risk-taking (Minsky [1986] 2008, Chapter 3). In a money manager capitalist regime, commercial banks are no different from any other profit-seeking corporations; they function on high leverage ratios, speculate and adjust lending to their liking. The Fed is detached from the endogenous money-creating processes in an economy, but it has to provide guarantees for and liquidity of otherwise unmarketable assets, turning into the ‘ultimate fallback source of financing’ for other banking institutions (Minsky [1986] 2008, p. 48). Decades of market failures and state interventions validating risky schemes have resulted in the concentration of financial power in the hands of money managers while worsening inequality in the economy and society. Therefore, consumption increasingly has to be supported by borrowing. However, this again increases financial fragility as a result of the increasing debt–income ratios of households.

1.5.4 Consequences of Money Manager Capitalism for Long-Run Development

The expansion of the financial sector since the 1960s has gone hand in hand with more uncertainty, financial structure fragility, and the need for frequent government stabilization of demand and economic activity, as well as lender of last resort interventions of the central bank. An economy, where a ‘long view (is) a luxury’ (Minsky 1996, p. 1) and short-term external financing dominates, becomes vulnerable to sudden disruptions, such as interest rate increases or cash flow shortfalls. This is

especially true for periods of economic expansion, when firms reduce their safety margins to a minimum in response to favourable expectations and, hence, to further forthcoming credit. A temporary shift from a hedge to speculative financial profiles can be handled by entities themselves; in a money manager capitalist economy, however, the whole financial sector tends to engage in speculative or Ponzi financing. The increasing relevance of financial markets and large corporations increasingly assuming the characteristics of financial institutions makes growth in money manager capitalism increasingly unstable and requires more frequent and more extensive government and central bank stabilization.

Wray (2011) establishes a direct connection between money manager capitalism and the global financial crisis. He singles out four important aspects of money manager capitalism which finally led to the crisis: 1) the rise of ‘managed money’ (pension funds, sovereign wealth funds, insurance funds, etc.) and the shift towards focusing on total returns (yields plus appreciation); 2) Wall Street firms going public by issuing traded shares and thus enjoying the advantage of issuing shares in a boom; 3) deregulation and de-supervision, which allowed financial institutions to engage in ever riskier activities, that is, holding riskier assets, taking more illiquid positions and increasing leverage; and 4) the rise of fraud as normal business procedure. These changes indicate the institutional and behavioural dimension of Minsky’s credo that ‘stability is destabilizing’, and Wray (2011, p. 16) concludes: ‘The current financial crisis is a natural outcome of these processes – an unsustainable explosion of real estate prices, mortgage debt, and leveraged positions in collateralized securities and derivatives in conjunction with a similarly unsustainable explosion of commodities prices and equities. The crash was inevitable.’

1.6 COMPARISON AND CONCLUSIONS

In this chapter we have surveyed some of the important literature on financial, economic and social systems with an eye towards explaining the tendencies towards financialization. We have focused on the French Regulation School, the US-based Social Structures of Accumulation approach, several contributions of post-Keynesian authors and, finally, in particular, the long-run views based on Hyman Minsky’s work. These approaches have in common the notion that capitalist development is embedded in social institutions and that institutions and economic development are mutually interdependent. In each of these approaches, different stages of development, or different regimes, of modern capitalism could be distinguished, the latest being the ‘finance-led growth regime’ (Regulation School), or the ‘(global)

neoliberal social structure of accumulation' (SSA approach), or 'finance-dominated capitalism' (post-Keynesians) or 'money manager capitalism' (Minsky), each describing the period of financialization, which started in the USA and the UK in about the late 1970s and early 1980s and somewhat later in other capitalist economies. The analysis has followed a four-step pattern for each of the approaches in order to facilitate comparison. First, we have sketched the basic structure of each of the approaches in order to single out how these approaches view the interaction between social institutions and the economy and the related dynamics regarding the development of the institutional structure and associated stages or regimes of economic development. We have then dealt with the question of how these approaches view the structural breaks or the regime shifts in the long-run development of modern capitalism that triggered, or at least contributed to, the emergence of financialization. In the third step we have outlined how these different approaches view the main characteristics and features of financialization, and in the fourth step we have dealt with the respective views on the consequences of financialization for long-run economic and social development, including the crisis of this stage of development. Therefore, we can now summarize and compare the four approaches in the four steps just mentioned:

1. Regarding the basic structures, all approaches consider 'capitalist' (Regulation School, SSA), 'monetary production' (post-Keynesians) or 'financial' (Minsky) economies to be inherently unstable and argue that these economies require stabilizing social institutions. Whereas the Regulation School and the SSA approach, based on the Marxian approach, view this instability as rooted in class conflict between capital and labour in the spheres of production and distribution, post-Keynesians present several requirements for institutions, which are rooted in their views of the nature of a 'monetary production economy', among them the need to cope with fundamental uncertainty, to provide stable monetary and financial relations, to constrain distribution conflict, and to stabilize aggregate demand in the short and in the long run. Minsky's view on institutions is based on the nature of financial economies, which is prone to the 'stability breeds instability' principle obviously rooted in human behaviour. Interestingly, the Regulation School and in particular the SSA approach, as well as Minsky provide an endogenous mechanism of institutional change, basically arguing that existing regimes are undermined by their success, which sets in motion certain processes that make the regime finally collapse. In the post-Keynesian approaches, institutional changes seem to be contingent on exogenous shocks, changing power relations and economic policy failures, without following definite 'laws of motion'.

2. According to the Regulation School and the SSA approach, the transition towards a 'finance-led growth regime' (Regulation School) or a 'global neoliberal SSA' (SSA approach) was based on the collapse of profitability in the previous regime, 'Fordism' or the 'regulated capitalist SSA'. Whereas the Regulation School draws on Marx's law of the tendency of the rate of profit to fall and argues that the crisis of profitability was caused by technological change, the SSA approach follows the Marxian profit squeeze theory and argues that, under the conditions of full employment, workers were able to squeeze the rate of surplus value and hence the profit share. This crisis of profitability had a negative impact on investment and growth and made the manager-worker compromise (Regulation School) or the capital-labour accord (SSA), and thus the most important pillar of the previous regime, collapse. Post-Keynesian authors have also drawn attention to the collapse of a 'social bargain' or a 'social compromise' as the cause for the erosion of the 'Golden Age' period of the 1950s until the early 1970s, which they relate to increasing inflation rates in the 1970s and the following economic policy responses. Cornwall and Cornwall (2001) argue that workers' and trade unions' excessive wage demands as compared to productivity under the conditions of full employment caused rising inflation rates and the 'social bargain' of the 'Golden Age' to collapse. Smithin (1996), however, considers the rising inflation rates of the 1970s to be the result of exogenous shocks and, in his view, it was monetary policies accepting negative real interest rates which made rentiers quit the social compromise of the 'Golden Age' period. Steindl ([1979] 1990) holds a similar view, arguing that the capitalist class as a whole became dominated by rentiers' interests, which then caused the implementation of anti-Keynesian 'stagnation policies'. Minsky's approach differs from those previously outlined in that he views the transition towards money manager capitalism rather as a gradual process, driven by the stability of 'paternalistic capitalism', and based on his credo 'stability breeds instability' by increasing appetite for risk etc.
3. When it comes to the main characteristics of the financialization period, we see some convergence among the different approaches, and no fundamental differences but some complementarities. In particular the Regulation School, the SSA approaches and the post-Keynesian contributions seem to agree that the financialization period is characterized by the deregulation and liberalization of national and international financial markets, goods markets and labour markets, by the reduction of government intervention in the market economy, by a rentier/shareholder-manager coalition dominating labour, by a

pronounced shareholder value and short-term profitability orientation of firms at the expense of long-run profitable investments in capital stock, by redistribution of income from wages to broad profits, and among wages from direct labour to managers, and by increasing opportunities of creating household debt for consumption purposes, as well as structural changes in the banking sector through securitization, in particular. Minsky's contribution is more narrowly focused on the characteristics of the financial sector in 'money manager capitalism', highlighting the role of leveraging, the shift towards speculative and Ponzi financing, the role of frauds, and the increasing instability generated hereby. Whereas these observations are complementary to the other approaches, highlighting the instability properties acknowledged by the other approaches too, the Minskyan view on the role of governments seems to be slightly different from the rest. Whereas the other approaches seem to argue that financialization is characterized by downsizing governments, the Minskyan approach highlights the changed role of governments and central banks as rescuer of last resort in the case of crisis, without necessarily claiming that government has been downsized in money manager capitalism.

4. Finally, regarding the effects of financialization on long-run development, Regulation School and SSA approaches seem to have given up their Marxian supply-side explanations of deep crises, that is, the falling rate of profit due to technological development argument and the profit squeeze approach, and seem to acknowledge that monetary production economies, at least nowadays, are demand constrained. Therefore, they now seem to accept the post-Keynesian argument that, in particular, redistribution at the expense of (lower) wages during the financialization period has caused a major problem for aggregate demand, which only temporarily could be overcome by increasing household debt, which then triggered the crisis. Therefore, there seems to be a common understanding now among the members of these schools regarding the importance of wage stagnation driving household debt, at least in some countries, and regarding the fragility of this process, underpinned by financial deregulation and innovations, as Setterfield (2011) has also pointed out. However, post-Keynesian contributions have clearly spelled out the macroeconomic conditions and constraints and have also highlighted that there are different types of development under financialization, with the 'debt-led consumption boom' type and the 'export-led mercantilist' type at the extremes, which immediately links the issues of inequality and of global current account imbalances as causes for the worldwide Great Recession. Again, the Minskyan contribution is much narrower and

more focused on the developments within the financial sector, highlighting the increasing instability potentials, which finally triggered the crisis. Following Palley (2010), we would therefore argue that the Minskyan contributions are important and complementary to the other approaches, but that they are not sufficient to explain the worldwide Great Recession – and the following developments. For this, redistribution as the fundamental feature of financialization, increases in household debt in several countries, and rising global current account imbalances have to be considered as well.

NOTES

1. 'Regulation, or regulationist, theory' and 'regulation approach' are used interchangeably in the literature. The term *régulation* ought to mean social regularization (Jessop 1997), rather than legal or state regulation. In the regulation theory the state is considered as (only) one among the institutions which are involved in regulation.
2. Juego (2011) and Tickell (2000) criticize Boyer (2000) for suggesting that financial innovations could provide the stability of this accumulation regime while disregarding the significant potential for political instability. Some other criticisms that have surrounded this work relate to the absence of the public sector in the model and the focus of analysis on a national economy (Tickell 2000; van Treeck 2009a), because it is quite impossible to theorize about a finance-led growth regime without more explicit reference to the political economy of international finance. Furthermore, the Boyer model lacks any systematic analysis of firms' and households' financial decisions as well as any stock–flow interactions of household deficits and debt. The non-consideration of these factors may have contributed to the underestimation of potentials for instability in finance-led growth economies.
3. Tabb (2010, p. 156) compares the financial innovation characteristic of the present SSA to Marx's notion of 'fictitious capital', that is, 'paper claims to ownership of capital that does not (or does not yet) exist in material form'.
4. There is also an asymmetry of information between the managers (insiders) and the capital markets. This enabled the firms to – quite often – misrepresent the performance of the firm to the capital markets. In the USA, the Generally Accepted Accounting Principles (GAAP) gave substantial freedom for interpretation (Boyer 2010, pp. 226–227), which resulted in a years-long overestimation of the publicly quoted corporations' and thus the stock market's performance. Additionally, during the second half of the 1990s the stock options granted to managers were not considered as a cost to corporations, making the corporate profits appear higher and consequently obtaining higher valuation of the shares.
5. See Lavoie (2006, Chapter 1, 2011) for an overview of 'presuppositions and key characteristics' of post-Keynesian economics and other heterodox schools of thought.
6. Lavoie (2011) also adds the 'paradox of liquidity' (Nesvetailova 2007) and the 'paradox of risk' (Wojnilower 1980).
7. Therefore, monetary production economies are contract economies, based on money as a unit of account, which then require institutions, hence a legal system, of contract and payments enforcement. Chartalists even argue that the very existence of money is based on the existence of the state and that 'money (broadly speaking) is a unit of account, designated by a public authority for the codification of social debt obligations' (Tcherneva 2006, p. 69). On modern money theory as the most recent incarnation of chartalism, see Wray (2012) and for an assessment see Lavoie (2013).

8. 'The exceptions were Austria, Japan, Norway, Sweden and Switzerland, where social bargains and full employment persisted until the early 1990s' (Cornwall and Cornwall 2001, p. 223).
9. A major purpose of Steindl's ([1979] 1990, [1989] 1990) contribution was, of course, to explain why the stagnation tendencies in mature capitalism he had detected in his earlier book, that is in Steindl ([1952] 1976), did not materialize in the post-Second World War period.
10. See also Epstein (1992), who has presented a three-class model of industrial capitalists, financial capitalists and workers, in which central bank policies are determined by capital-labour relations, industry-finance relations, the degree of central bank independence and the position of the economy in the world economy.
11. See for example Godley and Lavoie (2007, Chapter 11), Lavoie (2008), Skott and Ryoo (2008a, 2008b) and van Treeck (2008).
12. See for examples Palley's (2013, Chapter 8) notion of a 'Minsky super cycle'.

REFERENCES

- Aglietta, M. (1976), *Régulation et crises du capitalisme: L'expériences des Etats-Unis*, Paris: Calmann-Lévy. English translation, *A Theory of Capitalist Regulation: The US Experience*, London: Verso, 2000.
- Aglietta, M. (1998), 'Capitalism at the turn of the century: regulation theory and the challenge of social change', *New Left Review*, **232**, 41–90.
- Aglietta, M. and R. Breton (2001), 'Financial systems, corporate control and capital accumulation', *Economy and Society*, **30**, 433–466.
- Arestis, P. (2013), 'Economic theory and policy: a coherent post-Keynesian approach', *European Journal of Economics and Economic Policies: Intervention*, **10**, 243–255.
- Arestis, P. and M. Sawyer (1998), 'Keynesian economic policies for the new millennium', *Economic Journal*, **108**, 181–195.
- Barba, A. and M. Pivetti (2009), 'Rising household debt: its causes and macroeconomic implications – a long-period analysis', *Cambridge Journal of Economics*, **33**, 113–137.
- Bhaduri, A. (2011a), 'Financialisation in the light of Keynesian theory', *PSL Quarterly Review*, **64**, 7–21.
- Bhaduri, A. (2011b), 'A contribution to the theory of financial fragility and crisis', *Cambridge Journal of Economics*, **35**, 995–1014.
- Bhaduri, A. and J. Steindl (1985), 'Monetarism as a social doctrine', in P. Arestis and T. Skouras (eds), *Post-Keynesian Economic Theory*, Brighton: Wheatsheaf.
- Bhaduri, A., Laski, K. and M. Riese (2006), 'A model of interaction between the virtual and the real economy', *Metroeconomica*, **57**, 412–427.
- Boone, L. and N. Girouard (2002), 'The stock market, the housing market and consumer behaviour', *OECD Economic Studies*, **35**, 175–200.
- Boyer, R. (1987), 'Technical change and the theory of regulation', CEPREMAP Working Paper No. 8707, March, Paris.
- Boyer, R. (2000), 'Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis', *Economy and Society*, **29**, 111–145.
- Boyer, R. (2005), 'How and why capitalisms differ', MPIfG Discussion Paper No. 05(4), Max Planck Institute for the Study of Societies.
- Boyer, R. (2010), 'The rise of CEO pay and the contemporary social structure of

- accumulation in the United States', in T. McDonough, M. Reich and D.M. Kotz (eds), *Contemporary Capitalism and Its Crises: Social Structure of Accumulation Theory for the 21st Century*, Cambridge, UK: Cambridge University Press.
- Boyer, R. (2013), 'The present crisis: a trump for a renewed political economy', *Review of Political Economy*, **25**, 1–38.
- Brenner, R. and M. Glick (1991), 'The regulation approach: theory and history', *New Left Review*, **188**, 45–119.
- Cordonnier, L. (2006), 'Le profit sans l'accumulation: la recette du capitalisme dominé par la finance', *Innovations, Cahiers d'Economie de l'Innovation*, **23**, 51–72.
- Cornwall, J. and W. Cornwall (2001), *Capitalist Development in the Twentieth Century: An Evolutionary-Keynesian Analysis*, Cambridge, UK: Cambridge University Press.
- Crotty, J. (1990), 'Owner–management conflict and financial theories of investment instability: a critical assessment of Keynes, Tobin, and Minsky', *Journal of Post Keynesian Economics*, **12**, 519–542.
- Cynamon, B. and S. Fazzari (2008), 'Household debt in the consumer age: source of growth – risk of collapse', *Capitalism and Society*, **3** (2), 1–30.
- Dallery, T. (2009), 'Post-Keynesian theories of the firm under financialization', *Review of Radical Political Economics*, **41**, 492–515.
- Davidson, P. (1988), 'A technical definition of uncertainty and the long-run non-neutrality of money', *Cambridge Journal of Economics*, **12**, 329–337.
- Davidson, P. (1994), *Post Keynesian Macroeconomic Theory*, Aldershot, UK and Brookfield, VT, USA: Edward Elgar Publishing.
- Dutt, A.K. (2005), 'Conspicuous consumption, consumer debt and economic growth', in M. Setterfield (ed.), *Interactions in Analytical Political Economy: Theory, Policy and Applications*, Armonk, NY: M.E. Sharpe.
- Dutt, A.K. (2006), 'Maturity, stagnation and consumer debt: a Steindlian approach', *Metroeconomica*, **57**, 339–364.
- Epstein, G.A. (1992), 'Political economy and comparative central banking', *Review of Radical Political Economics*, **24**, 1–30.
- Epstein, G.A. (2005a), 'Introduction: financialization and the world economy', in G.A. Epstein (ed.), *Financialization and the World Economy*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Epstein, G.A. (ed.) (2005b), *Financialization and the World Economy*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Fisher, I. (1933), 'The debt-deflation theory of great depressions', *Econometrica*, **1**, 337–357.
- Fitoussi, J.-P. and J. Stiglitz (2009), 'The ways out of the crisis and the building of a more cohesive world', OFCE Document de Travail 2009-17, OFCE.
- Frank, R.H., A.S. Levine and O. Dijk (2014), 'Expenditure cascades', *Review of Behavioral Economics*, **1**, 55–73.
- Godley, W. and M. Lavoie (2007), *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth*, Basingstoke: Palgrave Macmillan.
- Gordon, D. (1981), 'Capital–labor conflict and the productivity slowdown', *American Economic Review, Papers and Proceedings*, **71** (2), 30–35.
- Gordon, D. (1995), 'Growth, distribution, and the rules of the game: social structuralist macro foundations for a democratic economic policy', in G.A. Epstein and H.M. Gintis (eds), *Macroeconomic Policy after the Conservative Era*, Cambridge, UK: Cambridge University Press.

- Gordon, D., T.E. Weisskopf and S. Bowles (1983), 'Long swings and the nonreproductive cycle', *American Economic Review, Papers and Proceedings*, **73** (2), 152–157.
- Gordon, D., T.E. Weisskopf and S. Bowles (1987), 'Power, accumulation and crisis: the rise and demise of the postwar social structure of accumulation', in R. Cherry (ed.), *The Imperiled Economy*, Book I, New York: Union for Radical Political Economics (URPE).
- Gordon, D.M., S. Bowles and T.E. Weisskopf (1994), 'Power, profits, and investment: an institutional explanation of the stagnation of U.S. net investment after the mid-1960s', Working Paper No. 12, New School for Social Research. Reprinted in S. Bowles and T.E. Weisskopf (eds) (1998), *Economics and Social Justice: Essays on Power, Labor and Institutional Change*, Cheltenham, UK and Lyme, NH, USA: Edward Elgar Publishing.
- Guttman, R. (2012), 'The heterodox notion of structural crisis', available at: http://www.assoekonomiepolitique.org/political-economy-outlook-for-capitalism/wp-content/uploads/2012/06/Guttman-Heterodox_Notion_of_Structural_Crisis.pdf.
- Guttman, R. and D. Plihon (2010), 'Consumer debt and financial fragility', *International Review of Applied Economics*, **24**, 269–283.
- Hein, E. (2002), 'Monetary policy and wage bargaining in the EMU: restrictive ECB policies, high unemployment, nominal wage restraint and inflation above the target', *Banca Nazionale del Lavoro Quarterly Review*, **55**, 299–337.
- Hein, E. (2012), *The Macroeconomics of Finance-dominated Capitalism – and its Crisis*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Hein, E. (2013), 'Finance-dominated capitalism and re-distribution of income – a Kaleckian perspective', *Cambridge Journal of Economics*, advance access, 2013, doi:10.1093/cje/bet038.
- Hein, E. and M. Mundt (2012), 'Financialisation and the requirements and potentials for wage-led recovery: a review focusing on the G20', Conditions of Work and Employment Series No. 37, International Labour Organization.
- Hein, E. and E. Stockhammer (2010), 'Macroeconomic policy mix, employment and inflation in a post-Keynesian alternative to the New Consensus model', *Review of Political Economy*, **22**, 317–354.
- Hein, E. and T. van Treeck (2010), "'Financialisation" in post-Keynesian models of distribution and growth – a systematic review', in M. Setterfield (ed.), *Handbook of Alternative Theories of Economic Growth*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Herr, H. (2012), 'International monetary and financial architecture', in E. Hein and E. Stockhammer (eds), *A Modern Guide to Keynesian Macroeconomics and Economic Policies*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Horn, G., K. Dröge, S. Sturn, T. van Treeck and R. Zwiener (2009a), 'From the financial crisis to the world economic crisis: the role of inequality', IMK Policy Brief, October, Macroeconomic Policy Institute (IMK) at the Hans Böckler Foundation, Düsseldorf.
- Horn, G., H. Joebges and R. Zwiener (2009b), 'From the financial crisis to the world economic crisis (II). Global imbalances: Cause of the crisis and solution strategies for Germany', IMK Policy Brief, December, Macroeconomic Policy Institute (IMK) at the Hans Böckler Foundation, Düsseldorf.

- Iacoviello, M. (2008), 'Household debt and income inequality, 1963–2003', *Journal of Money, Credit and Banking*, **40**, 929–965.
- Jessop, B. (1997), 'Survey article: the regulation approach', *Journal of Political Philosophy*, **5**, 287–326.
- Juego, B. (2011), 'Whither regulationism: reflections on the regulation approach', *Interdisciplinary Journal of International Studies*, **7** (1), 55–66.
- Kalecki, M. (1954), *Theory of Economic Dynamics*, London: George Allen & Unwin.
- Kalecki, M. (1971), *Selected Essays on the Dynamics of the Capitalist Economy, 1933–70*, Cambridge, UK: Cambridge University Press.
- Keynes, J.M. (1936), *The General Theory of Employment, Interest, and Money*. Reprinted in *The Collected Writings of J.M. Keynes*, Vol. VII, London: Macmillan, 1973.
- Kotz, D.M. (2011), 'Social structures of accumulation, the rate of profit, and economic crises', paper written for a Festschrift in honour of Thomas E. Weisskopf, University of Massachusetts, 1 October, available at: http://www.peri.umass.edu/fileadmin/pdf/conference_papers/weisskopf/D_Kotz_paper.doc.
- Kotz, D.M. and T. McDonough (2010), 'Global neoliberalism and the contemporary social structure of accumulation', in T. McDonough, M. Reich and D.M. Kotz (eds), *Contemporary Capitalism and Its Crises: Social Structure of Accumulation Theory for the 21st Century*, Cambridge, UK: Cambridge University Press.
- Krippner, G.R. (2005), 'The financialization of the American economy', *Socio-Economic Review*, **3**, 173–208.
- Lavoie, M. (2006), *Introduction to Post-Keynesian Economics*, Basingstoke: Palgrave Macmillan.
- Lavoie, M. (2008), 'Financialisation issues in a post-Keynesian stock-flow consistent model', *European Journal of Economics and Economic Policies: Intervention*, **5**, 331–356.
- Lavoie, M. (2011), 'History and methods of post-Keynesian economics', in E. Hein and E. Stockhammer (eds), *A Modern Guide to Keynesian Macroeconomics and Economic Policies*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Lavoie, M. (2013), 'The monetary and fiscal nexus of neo-chartalism: a friendly critique', *Journal of Economic Issues*, **47**, 1–31.
- Lipietz, A. (1987), 'Rebel sons: the regulation school, an interview by Jane Jenson', *French Politics and Society*, **5** (4), 17–26.
- Lippit, V.D. (2010), 'Social structure of accumulation theory', in T. McDonough, M. Reich and D.M. Kotz (eds), *Contemporary Capitalism and Its Crises: Social Structure of Accumulation Theory for the 21st Century*, Cambridge, UK: Cambridge University Press.
- Ludvigson, S. and C. Steindel (1999), 'How important is the stock market effect on consumption?', *Federal Reserve Bank of New York Economic Policy Review*, July, 29–51.
- Marx, K. (1894), *Das Kapital: Kritik der politischen Ökonomie*, Dritter Band: *Der Gesamtprozeß der kapitalistischen Produktion*, edited by F. Engels. Reprinted in *Marx-Engels-Werke*, Vol. 25, Berlin: Dietz Verlag, 1964. English translation, *Capital: A Critique of Political Economy*, Vol. 3: *The Process of Capitalist Production as a Whole*, New York: International Publisher, 1967.
- McDonough, T., M. Reich and D.M. Kotz (2010), 'Introduction: social structure

- of accumulation theory for the 21st century', in T. McDonough, M. Reich and D.M. Kotz (eds), *Contemporary Capitalism and Its Crises: Social Structure of Accumulation Theory for the 21st Century*, Cambridge, UK: Cambridge University Press.
- Mehra, Y.P. (2001), 'The wealth effect in empirical life-cycle aggregate consumption equations', *Federal Reserve Bank of Richmond Economic Quarterly*, **87** (2), 45–68.
- Minsky, H. (1975), *John Maynard Keynes*, London: Macmillan.
- Minsky, H. (1986), *Stabilizing an Unstable Economy*. Reprinted by McGraw-Hill, New York, 2008.
- Minsky, H. (1995), 'Longer waves in financial relations: financial factors in the more severe depressions II', *Journal of Economic Issues*, **29**, 83–96.
- Minsky, H. (1996), 'Uncertainty and the institutional structure of capitalist economies', Working Paper No. 155, April, Jerome Levy Economics Institute, Annandale-on-Hudson, New York.
- Minsky, H. and C.J. Whalen (1996), 'Economic insecurity and the institutional prerequisites for successful capitalism', Working Paper No. 165, May, Jerome Levy Economics Institute, Annandale-on-Hudson, New York.
- Nesvetailova, A. (2007), *Fragile Finance: Debt, Speculation and Crisis in the Age of Global Credit*, Basingstoke: Palgrave Macmillan.
- Nilsson, E.A. (1996), 'The breakdown of the U.S. postwar system of labor relations: an econometric study', *Review of Radical Political Economics*, **28** (1), 20–50.
- Nilsson, E.A. (1997), 'The growth of union decertification: a test of two nonnested theories', *Industrial Relations*, **36**, 324–348.
- Onaran, Ö., E. Stockhammer and L. Grafl (2011), 'Financialisation, income distribution and aggregate demand in the USA', *Cambridge Journal of Economics*, **35**, 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**, 863–886.
- Palley, T. (1996), 'Restoring prosperity: why the US model is not the answer for the United States or Europe', *Journal of Post Keynesian Economics*, **20**, 337–351.
- Palley, T. (2008), 'Financialisation: what it is and why it matters', in E. Hein, T. Niechoj, P. Spahn and A. Truger (eds), *Finance-led Capitalism? Macroeconomic Effects of Changes in the Financial Sector*, Marburg: Metropolis.
- Palley, T. (2010), 'The limits of Minsky's financial instability hypothesis as an explanation of the crisis', *Monthly Review*, **61** (11), 28–43.
- Palley, T. (2012), *From Crisis to Stagnation: The Destruction of Shared Prosperity and the Role of Economics*, Cambridge, UK: Cambridge University Press.
- Palley, T. (2013), *Financialization: The Economics of Finance Capital Domination*, Basingstoke: Palgrave Macmillan.
- Pressman, S. (2012), 'Institutionalism', in J.E. King (ed.), *The Elgar Companion to Post Keynesian Economics*, 2nd edn, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Robinson, J. (1962), *Essays in the Theory of Economic Growth*, London: Macmillan.
- Rowthorn, R. (1981), 'Demand, real wages and economic growth', Thames Papers in Political Economy, Autumn, London.
- Setterfield, M. (2007), 'The rise, decline and rise of incomes policies in the US during the post-war era: an institutional-analytical explanation of inflation and

- the functional distribution of income', *Journal of Institutional Economics*, **3** (2), 127–146.
- Setterfield, M. (2011), 'Anticipations of the crisis: on the similarities between post-Keynesian economics and regulation theory', *Revue de la Régulation*, **10**, available at: <http://regulation.revues.org/9366>.
- Skott, P. and S. Ryoo (2008a), 'Macroeconomic implications of financialization', *Cambridge Journal of Economics*, **32**, 827–862.
- Skott, P. and S. Ryoo (2008b), 'Financialization in Kaleckian economics with and without labor constraints', *European Journal of Economics and Economic Policies: Intervention*, **5**, 357–386.
- Smithin, J. (1996), *Macroeconomic Policy and the Future of Capitalism: The Revenge of the Rentiers and the Threat to Prosperity*, Cheltenham, UK and Brookfield, VT, USA: Edward Elgar Publishing.
- Steindl, J. (1952), *Maturity and Stagnation in American Capitalism*, 2nd edn, New York: Monthly Review Press, 1976 .
- Steindl, J. (1979), 'Stagnation theory and stagnation policy', *Cambridge Journal of Economics*, **3**, 1–14. Reprinted in J. Steindl, *Economic Papers, 1941–88*, Basingstoke: Macmillan, 1990.
- Steindl, J. (1989), 'From stagnation in the 30s to slow growth in the 70s', in M. Berg (ed.), *Political Economy in the Twentieth Century*, Oxford: Philip Allan. Reprinted in J. Steindl, *Economic Papers, 1941–88*, Basingstoke: Macmillan, 1990.
- Stockhammer, E. (2004), 'Financialisation and the slowdown of accumulation', *Cambridge Journal of Economics*, **28**, 719–741.
- Stockhammer, E. (2005–06), 'Shareholder value orientation and the investment–profit puzzle', *Journal of Post Keynesian Economics*, **28**, 193–215.
- Stockhammer, E. (2008), 'Some stylized facts on the finance-dominated accumulation regime', *Competition and Change*, **12**, 189–207.
- Stockhammer, E. (2010a), 'Income distribution, the finance-dominated accumulation regime, and the present crisis', in S. Dullien, E. Hein, A. Truger and T. van Treeck (eds), *The World Economy in Crisis – The Return of Keynesianism?*, Marburg: Metropolis.
- Stockhammer, E. (2010b), 'Neoliberalism, income distribution and the causes of the crisis', Research on Money and Finance Discussion Paper No. 19, Department of Economics, SOAS, London.
- Stockhammer, E. (2012a), 'Financialization, income distribution and the crisis', *Investigación Económica*, **71** (279), 39–70.
- Stockhammer, E. (2012b), 'Rising inequality as a root cause of the present crisis', Working Paper Series No. 282, Political Economy Research Institute (PERI), University of Massachusetts Amherst.
- Tabb, W.K. (2010), 'Financialization in the contemporary social structure of accumulation', in T. McDonough, M. Reich and D.M. Kotz (eds), *Contemporary Capitalism and Its Crises: Social Structure of Accumulation Theory for the 21st Century*, Cambridge, UK: Cambridge University Press.
- Tcherneva, P. (2006), 'Chartalism and the tax-driven approach to money', in P. Arestis and M. Sawyer (eds), *A Handbook of Alternative Monetary Economics*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Tickell, A. (2000), 'Finance-led growth after Fordism: observation on Boyer, R. (2000) Is a finance-led growth regime a viable alternative to Fordism?', comments presented at ESRC/International Centre for Labour Studies Workshop,

- November 1999, Manchester University, available at: http://www2.cddc.vt.edu/digitalfordism/fordism_materials/Tickell.pdf.
- Tymoigne, E. and L.R. Wray (2014), *The Rise and Fall of Money Manager Capitalism: Minsky's Half Century from World War Two to the Great Recession*, London: Routledge.
- UNCTAD (2009), *The Global Economic Crisis: Systemic Failures and Multilateral Remedies*, New York: UNCTAD.
- van Treeck, T. (2008), 'Reconsidering the investment–profit nexus in finance-led economies: an ARDL-based approach', *Metroeconomica*, **59**, 371–404.
- van Treeck, T. (2009a), 'The political economy debate on "financialisation" – a macroeconomic perspective', *Review of International Political Economy*, **16**, 907–944.
- van Treeck, T. (2009b), 'A synthetic stock-flow consistent macroeconomic model of "financialisation"', *Cambridge Journal of Economics*, **33**, 467–493.
- van Treeck, T. and S. Storn (2012), 'Income inequality as a cause of the Great Recession? A survey of current debates', *Conditions of Work and Employment Series No. 39*, International Labour Organization.
- van Treeck, T., E. Hein and P. Dühaupt (2007), 'Finanzsystem und wirtschaftliche Entwicklung: neuere Tendenzen in den USA und in Deutschland', *IMK Studies 5/2007*, Macroeconomic Policy Institute (IMK) at the Hans Böckler Foundation, Düsseldorf.
- Wade, R. (2009), 'From global imbalances to global reorganisations', *Cambridge Journal of Economics*, **33**, 539–562.
- Wojnilower, A.M. (1980), 'The central role of credit crunches in recent financial history', *Brookings Papers on Economic Activity*, **2**, 277–326.
- Wray, L.R. (2009a), 'Money manager capitalism and the global financial crisis', *Real-World Economics Review*, **51**, 55–69.
- Wray, L.R. (2009b), 'The rise and fall of money manager capitalism: a Minskian approach', *Cambridge Journal of Economics*, **33**, 807–828.
- Wray, L.R. (2011), 'Minsky's money manager capitalism and the global financial crisis', *International Journal of Political Economy*, **40** (2), 5–20.
- Wray, L.R. (2012), *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*, Basingstoke: Palgrave Macmillan.