Firms' Objectives, Macroeconomic Growth Regimes and Finance

Building on the established Post Keynesian theory of the firm, we identify different stakeholders inside and outside the firm, and we assess their potentially conflicting objectives. Depending on the bargaining power of these different stakeholders, we can distinguish different macroeconomic growth regimes characterized by the priority given to the realization of the dominant class's objectives. In previous work (Dallery and van Treeck, 2008), we have analysed these different institutional configurations of capitalism, which we call Fordism and financialisation, within a formal stock-flow consistent macro model. Here, we focus more specifically on linking macroeconomic growth dynamics to our reassessment of the Post Keynesian theory of the firm. Based on this microeconomic analysis, we stress the risk of financial fragility and macroeconomic instability involved with financialised capitalism.

Partiendo de la teoría postkeynesiana de la empresa, identificamos distintos agentes interesados (stakeholders) dentro y fuera de la empresa, y evaluamos sus intereses potencialmente conflictivos. Dependiendo del poder negociador de estos agentes, podemos distinguir distintos regímenes de crecimiento macroeconómico caracterizados por la prioridad atribuida a la consecución de los objetivos por parte de los grupos sociales dominantes. Así como en un trabajo anterior hemos analizado las diferentes configuraciones institucionales del capitalismo, que denominamos fordismo y financiarización, en el marco de un modelo macroeconómico consistente stock-flujo, en éste nos centramos en relacionar la dinámica de crecimiento económico con la actualización de la teoría postkeynesiana de la empresa. Basándonos en este análisis microeconómico, resaltamos el riesgo de fragilidad financiera y la inestabilidad macroeconómica derivada del capitalismo financiarizado.

*Enpresaren teoria postkeynesiarra oinarri hartuta, hainbat agente interesdun (*stakeholders*) identifikatu ditugu enpresa barruan eta enpresatik kanpo, eta gatazkatsuak izan daitezkeen haien interesak ebaluatu ditugu. Agente horien negoziazio-gaitasunaren arabera, hazkuntza makroekonomikoaren hainbat erregimen bereiz ditzakegu, horien ezaugarri nagusia gizarte-talde nagusiek helburuak lortzeari emandako lehentasuna dela. Aurreragoko lan batean kapitalismoaren hainbat konfigurazio instituzional aztertu genituen (fordismoa eta finantzarizazioa), stock-fluxuan oinarritutako eredu makroekonomikoaren eremuan. Oraingo honetan, aldiz, hazkuntza ekonomikoaren dinamika enpresaren teoria postkeynesiarrarekin lotzea da gure asmoa. Azterketa mikroekonomiko hori oinarri hartuta, kapitalismo finantzarizatutik eratorritako ezegonkortasun makroekonomikoa eta finantza-hauskortasunerako arriskua nabarmendu behar dira.*

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INDEX

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1. **INTRODUCTION**

The paper is based on the notion that the weight of finance in the economy, while governing firms' objectives at the microeconomic level, is key to understanding macroeconomic growth regimes in historical trends (Minsky, 1986 [2008]).

Building on the established Post-Keynesian theory of the firm (Eichner, 1976 ; Galbraith, 1967; Marris, 1964; Wood, 1975; Lavoie, 1992), we identify different stakeholders inside and outside the firm, and we assess their potentially conflicting objectives. Depending on the bargaining power of these different stakeholders, we can distinguish different macroeconomic growth regimes characterized by the priority given to the realization of the dominant class's objectives. In previous work (Dallery and van Treeck, 2008), we have analysed these different institutional configurations of capitalism, which we call Fordism and financialisation, within a formal stock-flow consistent macro model. Here, we focus more specifically on linking macroeconomic growth dynamics to our reassessment of the Post Keynesian theory of the firm. Within our very simple framework, we distinguish four different groups of stakeholders, each one having its own objectives: shareholders owning the firm and pursuing profit rate targets, managers ruling the firm and pursuing growth targets, workers selling their labour force and pursuing real wage targets, and finally banks providing funds to finance firm's projects and pursuing leverage targets. The Post Keynesian theory of the firm provides a socially- and institutionally-contingent analytical framework, and the fulfilment of a particular objective of a specific group of interest may lead to the violation of the objectives of one or more other class(es) (Dallery and van Treeck, 2008).

The deregulation of the financial system leads to changing power relations inside firms, so that firms' objectives and policies also evolve towards a more finance-oriented view in support of shareholders' objectives, that is, (short-term) profitability. One main aim of this contribution is to discuss in how far "financialisation"[1] modifies the relationship between capital accumulation and profitability at both the microeconomic and macroeconomic level. To understand how financialisation affects capitalist dynamics, one has to rely on both the microeconomic assertion of firms' objectives and the macroeconomic realization or not of these objectives.

The interlinked history of finance and overall macroeconomic development is more accurately described as a turn around rather than as a steady move forward. To understand today's capitalism, a parallel can be drawn with the macroeconomic dynamics of the 1920s, where the industrialised countries also underwent a far-reaching deregulation of the financial system. Crotty (1990, p. 762) stresses that J.M. Keynes himself analysed the consequences of an increasing financial sector on capitalist dynamics:

> "I argue that Keynes provided the outlines of a theory of the evolution of two distinct stages of capitalist development (and anticipated the transition toward a third) in which each stage is assumed to possess unique institutions and agent practices that differentiate its processes and outcomes from the other. Specifically, Keynes argues that nineteenth-century capitalism differed in institutional and class structure as well as in agent behavior patterns from post World War I capitalism. Because of these institutional differences, nineteenth-century capitalism exhibited impressive economic growth and stability, whereas twentieth-century capitalism was prone to stagnation-depression as well as to bouts of extreme instability."

The current concern with the macroeconomics of financialisation, as the most recent stage of development of capitalism, lies in the continuity of both Keynes's theoretical and empirical-historical interests, as sketched in the quote from Crotty (1990) given above. In our view, the different stages of capitalist development identified by Keynes can be distinguished largely on the basis of differences in financial institutions and corporate governance. In particular, Keynes distinguished between a 19th century type of entrepreneurial capitalism, where firms were fully dominated by rich individuals who were largely independent of external financiers, and the interwar finance capitalism of the 20th century, where shareholders dominated the manager-owner conflict and "enterprise (became) the bubble on a whirlpool of speculation" (Keynes, 1936 [1997, p. 159]). Keynes also anticipated and advocated steps to be taken towards a third stage of development, which would have given rise to a sort of managed capitalism, in which short-termist financial speculation would have been prohibited through financial market regulations and where private managers and the state would have controlled and stabilised the real accumulation process. While Keynes did not live long enough to analyse this third type of capitalism in greater depth, Post Keynesian authors have subsequently applied and further developed his theoretical insights to this later stage of development of capitalism, which has often be referred to as the Fordist era (Aglietta, 1976; Boyer, 1990), or the Golden Age of Capitalism (Marglin and Schor, 1990).

[1] For a definition of financialisation, see Epstein (2005).

But, it seems that we have been witnessing, for the last 20 or 30 years or so, a fourth stage of development of capitalism which shares many properties with the second stage of development described by Keynes in his times. Here, we extend Keynes' methodology to modern financialisation, and we study the passage from the Fordist growth regime to the finance-dominated growth regime.

The paper is structured in four sections as follows. In the second section, we present the microeconomic framework of the theory of the firm, and the different objectives of each group of stakeholders as announced previously in this introduction. In the third section, we apply this Post-Keynesian theory of the firm to expose the macroeconomic dynamics of both managed capitalism (or the Fordist era) and financialised capitalism. First, we illustrate the channels through which a virtuous circle of high growth and profitability, increasing real wages and low leverage rates had managed to satisfy the different stakeholders during the cooperative Golden Age. Then, we turn to the study of the current finance-led capitalism and its imbalances. In particular, we attempt to demonstrate the micro-macro causal chains necessary to explain the "investment-profit puzzle", that is, the macroeconomic divorce between (high) profitability and (sluggish) accumulation that has been observed for a number of countries over the past decades (e.g. Stockhammer, 2005-6). We also discuss the inherent macroeconomic contradictions of a finance-led growth regime as well as the microeconomic mechanisms which may help to at least temporarily alleviate these contradictions. The fourth section briefly concludes.

2. THE POST KEYNESIAN THEORY OF THE FIRM: THE FIRM AS THE PLACE OF CONFLICTS IN A CAPITALIST SYSTEM

In this Section, we will survey and reassess important features of the Post Keynesian theory of the firm. Especially, we will focus on the conflicts among different stakeholders (shareholders, managers, workers, banks) trying to impose their own objectives as the firm's objectives. Since the main purpose of this paper is an analysis of financialisation, we will analyse the manager-owner conflict in some greater depth, which has been the subject of a very prolific literature on principle-agent problems and corporate governance issues, starting most notably with Jensen and Meckling (1976).

2.1. The Post Keynesian theory of the firm as a general framework for an analyse of firms' objectives and policies

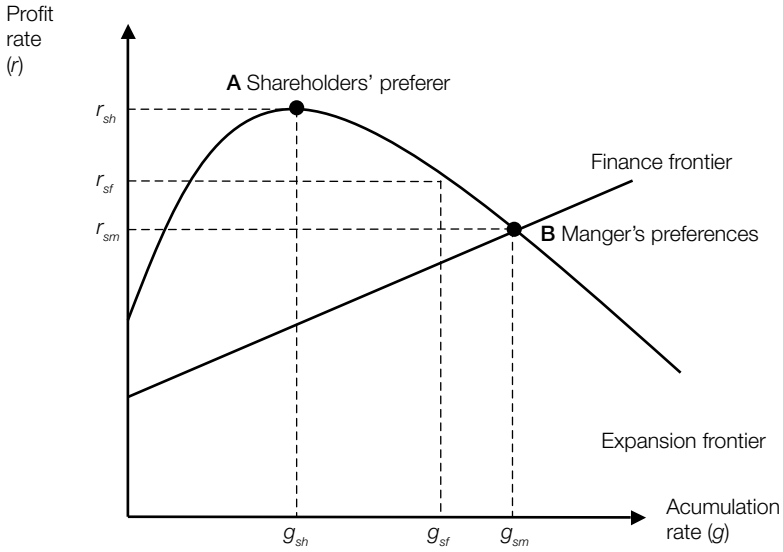
In his Treatise on Money, Keynes (1930, vol. II, p. 149), summarises his investment theory as follows:

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

The canonical Post Keynesian theory of the firm is based on a very similar idea. As illustrated graphically in Figure 1, the investment decision of the individual firm will be determined by the interplay of the expansion frontier and the finance frontier as perceived by the firm. While the expansion frontier determines the firm's

Figure 1

The Post-Keynesian firm and the shareholder-manager conflict



Source: Dallery and van Treeck (2008, p. 9).

expected profitability as a function of its rate of growth, the finance frontier indicates the maximum rate of growth which the firm can realise given its financing and pricing decisions, which are subject to conflicts with workers and rentiers.

Figure 1 will serve as a reference point in the rest of this paper. The first appearance of this representation may be tracked back to Wood (1975). Here, we will use its modern exposition (Lavoie, 1992 ; Dallery, 2008). The model presented here is a very basic model and assumes away many complications. Its main virtue is that it can be pedagogically represented as a simple two-curve diagram which links profit rates and accumulation rates.

The first component of the traditional theory of the firm is the finance constraint, represented graphically by the finance frontier in Figure 1. Profits are a prerequisite for investment because they are a mean to internally finance investment, and at the same time profits will be seen by banks as a signal of the firm's creditworthiness, and a profitable firm will also find it easier to raise funds by issuing new equities. Starting with the accounting equality of sources of funds and uses of funds, we simply assert here that the individual firm has to decide its productive investment and its financial investment spending, given its retained earnings and the funds stemming from net new borrowing and net new share issues:

$$(\Pi - iD) + x_s I + x_d I = I + x_f I + (1 - s_f)(\Pi - iD)$$
$$\Leftrightarrow s_f(\Pi - iD) + x_s I + x_d I = I + x_f I \quad (1)$$

with s_f being the retention ratio, Π firm's profits, i the interest rate, D the stock of debt, I physical investment, and x_s, x_d and x_f stand for respectively net new share issues, net new debt and financial investment, each expressed as a ratio of physical investment. We can rearrange this equation in order to have the minimum profit margin (π) necessary to finance a given growth rate of the capital stock (g):

$$\pi = \frac{\Pi}{Y} = \left(\frac{I}{K}\frac{K}{Y^*}\frac{Y^*}{Y}\right)\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + \left(\frac{K}{Y^*}\frac{Y^*}{Y}\right) i \frac{D}{K} \quad (2)$$
$$\Leftrightarrow \pi = \left(\frac{gv}{u}\right)\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + \left(\frac{v}{u}\right) id$$

where v is the ratio of capital stock to full-capacity output, u is the rate of utilization of the firm's productive capacity and d is the ratio of the amount of debt to capital stock. The more the firm desires to invest, the higher the profit margin necessary to finance its accumulation goal. Moreover, the firm will need a high profit margin if it invests a lot on financial markets, if the interest rate is high or if the debt-to-capital ratio is high. Conversely, the firm will be able to secure its investment more easily, if it has a high retention ratio, if it finances an important part of investment either through net new borrowing or net new share issues.

The profit margin is a key determinant of the pricing policy for the firm. Since the Post-Keynesian firm is supposed to set prices according to a cost-plus pricing procedure, one can derive the general formula for the mark-up pricing behaviour of the firm as follows:

$$p = (1 + m)\frac{w}{\mu} \quad (3)$$

where m is the mark-up rate, w labour costs and μ labour productivity. In the absence of overhead labour, it is possible to establish a simple relation between the mark-up rate and the profit margin:

$$\pi = \frac{m}{1 + m} \quad (4)$$

It follows that the finance frontier can be associated with the pricing behaviour of the firm. The finance frontier gives the minimum profit margin necessary to secure investment. Seen from this perspective, the need to secure investment with high margins and the need to boost sales with low prices appear conflictive.

In the remainder of the paper, we will express the finance frontier in terms of profit rates in order to place it in the same plan as the expansion frontier, so that the finance frontier in (2) becomes:

$$r = g\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + id \quad (5)$$

The finance constraint now gives the minimum rate of profit necessary to implement any rate of accumulation. Graphically, the area to the right of the finance constraint is unsustainable, because here the firm is unable "to obtain command of sufficient resources to put their projects into execution" Keynes (1930, vol. II, p. 149). On the contrary, firms located on the left side preserve themselves finance opportunities for additional spending.

The second component of the theory of the firm is called by Lavoie (1992) the expansion frontier. It gives the maximum

level of profitability that can be expected by the firm at a given rate of investment. There is a concave relation between accumulation and profit expectations. Typically, accumulation and profit rates are positively related for low rates of growth and negatively related for higher rates of growth (see Figure 1). Formally, the logic behind the expansion frontier can be illustrated on the basis of the usual accounting decomposition of the profit rate:

$$r = \frac{\Pi}{K} = \frac{\Pi}{Y}\frac{Y}{Y^*}\frac{Y^*}{K} = \frac{\pi u}{v} \qquad (6)$$

For low accumulation rates, the firm is able to incorporate efficiency gains thanks to the implementation of new production technologies. The increase in productivity allows the firm to improve its profit margin without raising its price (see equations 3 and 4), so that the profit rate goes up at a given rate of capacity utilisation. For high accumulation rates, the firm is obliged to reduce its price and therefore its profit margin if it wants to increase its sales fast enough while keeping utilization constant.[2] The position of the expansion frontier is explained by the rate of capacity utilization or the different macroeconomic influences on the profit margin stemming from conflicts with workers or the intensity of competition on the market. Moreover, a firm with better technology (lower capital-full capacity output ratio) benefits from a competitive advantage over its rivals, and it means that its expansion frontier will be located above those of its competitors. This firm will be able, for each rate of accumulation, to implement a higher profit margin compared to its competitors.

[2] Lavoie (1992, p. 115) highlights the importance of the "Penrose effect": "There are no managerial diseconomies of scale, but there are increasing costs to growth. The negative segment of the expansion frontier [...] is thus due in part to the inherent difficulties of management in coping efficiently with change and expansion". More convincingly, Wood (1975) explained this negative relationship with the need for the firm to reduce its profit margin if it desires to grow at a faster rate, because of market share's competition with other firms and increasing selling costs like advertising costs.

2.2. The microeconomic objectives of the different stakeholders and their macroeconomic relevance

The position of the finance and expansion frontiers as well as the way the firm copes with the different constraints weighing on its investment decision depend crucially on the interests of and power relations between the different stakeholders of the firm. In this perspective, the Post Keynesian theory of the firm clearly appears as an institutionally and historically contingent theory. In particular, we can identify three types of conflict within the firm: a) the manager-owner conflict over investment policy, b) the conflict between workers and capitalists over the distribution of income, and c) the manager-shareholder-creditor conflict over the financing of investment. In the remainder of this section, we shall briefly discuss the general macroeconomic relevance of these microeconomic conflicts. In the next section, we discuss how the outcome of these conflicts may have affected overall macroeconomic development throughout the Fordist period and under financialisation.

a) *The owner-manager conflict over investment policy*

The manager-owner conflict stems from the postulation of a trade-off between

expected profitability and growth. Keynes (1936) himself argues that in the first stage of development of capitalism, which we have called entrepreneurial capitalism above, profit expectations did not play much of a role for firms' accumulation decisions:

> "In former times, when enterprises were mainly owned by those who undertook them or by their friends and associates, investment depended on a sufficient supply of individuals of sanguine temperament and constructive impulses who embarked on business as a way of life, not really relying on a precise calculation of prospective profit. … Business men play a mixed game of skill and chance, the average results of which to the players are not known by those who take a hand. If human nature felt no temptation to take a chance, no satisfaction in constructing a factory, a railway, a mine or a farm, there might not be much investment merely as a result of cold calculation."
>
> (Keynes, 1936 [1997, p. 150])

By contrast, in the interwar finance capitalism, shareholders had become the dominant actors within firms and profitability pressures expressed through the stock market suppressed the individual entrepreneur's desire for expansion:

> "Thus certain classes of investment are governed by the average expectation of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectations of the professional entrepreneur. … As a result of the gradual increase in the proportion of the equity in the community's aggregate capital investment which is owned by persons who do not manage and have no special knowledge of the circumstances, either actual or prospective, of the business in question, the element of real knowledge in the valuation of investments by those who own them or contemplate purchasing them has seriously declined."
>
> (Keynes, 1936 [1997, p. 151-3])

In our view, a very similar comparison can be established for the third and fourth stages of development of capitalism, that is, Fordism and financialisation. In the traditional Post Keynesian theory of the firm, it has been argued that the management of the large corporation (Eichner's (1976) "megacorp") was largely autonomous in its investment decisions. The main interest of such managements (Galbraith's, 1967, "technostructure") has traditionally been seen to be the growth of the firm, subject to only loose profitability constraints enforced by rentiers. The following quotes make this point very clear:

> […] ownership of firms […] is limited to the capitalist class. This can be divided into the entrepreneurs and rentiers. The latter group, whilst having an ownership interest, do not actively participate in control. […]. The entrepreneuers are controllers and part-owners of firms and make the effective decisions on the operation of firms
>
> (Sawyer, 1985, p. 72)

> Once the safety of the technostructure is ensured by a minimum level of earnings, there is then a measure of choice as to goals. Nothing is so compelling as the need to survive. However, there is little doubt as to how, overwhelmingly, this choice is exercised: It is to achieve the greatest possible rate of corporate growth as measured in sales.
>
> (Galbraith, 1967, p. 177)

> In the mature corporation the technostructure sets prices not where they maximize profits but where they best contribute to the security of the technostructure and to the growth of the firm.
>
> (Galbraith, 1967, pp. 252-3)

In terms of Figure 1, it can be argued that the Fordist firm, where management is

in full control over firms' accumulation policies, will maximise growth at the point of intersection between the expansion and finance frontiers (Lavoie, 1992, p. 117; 2004, p. 52; Dallery and van Treeck, 2008), i.e. Keynes's second constraint will be binding.

The assumption of growth maximisation does not imply that profits are unimportant to managements. Both shareholders and managers seek profits, but for managers they are a means to an end, while for shareholders they are an end in itself. In an environment of radical or fundamental uncertainty (Knight, 1921; Keynes, 1936; Davidson, 1996), the individual firm has to adopt strategic policies to survive in the long run (Dunn, 2001). In particular, these policies have to reduce uncertainty, and the best way to do this remains the pursuit of growth. While growing, the firm increases its power over its environment (customers, competitors, providers and the State). But, to be able to grow and accumulate as fast as desired by managers, the firm needs to secure sufficient means of finance. Profits are thus a prerequisite for growth because they release the financial constraint on accumulation. In terms of Figure 1, managers derive an implicit profit rate target, r_{sm}, from their growth target, g_{sm}.

This priority given to growth by managers has been criticized by the New Institutional Economics literature on agency problems, or more recently by the whole literature devoted to the new rules of corporate governance (e.g. Jensen and Meckling, 1976; Fama, 1980; OECD, 1998). The argument is that there exists a kind of optimal firm size, and that managers always want to go beyond this optimal size leading to an overly large and unproductive administration and more generally to an inefficient use of resources and hence a loss in efficiency. In this view, managers have to be disciplined to avoid excessive growth of the firm. In terms of Figure 1, when shareholders are fully dominant vis-à-vis managers, the firm will realise a growth rate g_{sh}, in an attempt to achieve the highest possible profit rate, r_{sh}, given the level of demand, productivity, and competition. Yet, as we shall discuss in the next section, there is a composition effect at the macroeconomic level. Indeed, if an attempt to cut back on investment in order to reduce firm size and increase profitability may be successful at the microeconomic level, the same behaviour at the macroeconomic level probably leads into a depression. Once again, one has to recall that investment is a key component of aggregate demand. If all firms reduce their investment, aggregate demand will be depressed, and the increase in profitability, which was the initial rationale for such a policy, will be undermined.

b) *The conflict between workers and capitalists over income distribution*

At the level of the individual firm, workers are assumed to claim a high level of wages, based on an idea of their targeted real wages. To simplify the framework, we suppose that workers do claim a certain rate of real wages at the macroeconomic level, which means that, at the microeconomic level, they are interested in a wage share in the value added of their firm. The conflict arises because wages are seen in the same time as an income for workers and as a cost for firms. As an income, wages have to be increased for workers, because they provide for enhanced purchasing power and improving

living standards. As a cost, wages have to be tempered for an individual firm, because, for given pricing and productivity conditions, increasing wages mean less profits (see equation 3). In terms of Figure 1, higher real wages imply a downward shift of the expansion frontier from the point of view of the individual firm. However, at the macroeconomic level, consumption stemming from wages feeds demand and hence profits (the expansion frontier in Figure 1 shifts upwards). This composition effect of demand, which is also called the "paradox of costs", is at the heart of (Post) Keynesian macroeconomics, and it explains the possibility of "wage-led" growth in the sense of Bhaduri and Marglin (1990): the individual firm has an interest in minimising its wage bill, but if all firms act in the same way, aggregate demand will be depressed, and the individual firm will not realise the rise in profits it pursued by containing its wage bill.

c) *The manager-shareholder-creditor conflict over the financing of investment*

The third conflict we previously alluded to implies managers, shareholders and banks and concerns the financial structure of firms. Managers' preference for growth implies a need for funds to finance investment. Due to their aversion against indebtedness which involves financial fragility and dependence vis-à-vis banks, the preferred means of finance for managers is self-financing through retained earnings. Shareholders who are interested in firms' value on the market are opposed to new equity issues as a means to finance investment, because this would enlarge the number of recipients of dividend payments. But shareholders are also opposed to self-financing, because, as firms' owners, they claim back firms' profits to be paid to them in the form of dividends or share buybacks. Briefly speaking, shareholders want firms to contain investment spending and to finance it through debt. The point here is that shareholders are not primarily concerned with firms' long term survival. Rather, they are interested in the profitability of their diversified portfolio (Crotty, 1990). As a consequence, they would like to push the leverage effect to the maximum, regardless of the financial fragility it implies for a particular firm. But, again, there are composition effects at the macroeconomic level. On the one hand, macroeconomic growth may be "debt-led", when firms simultaneously increase profit payouts, thereby stimulating personal consumption, and implement more and more real investment projects, say as a result of a stock market boom and overly optimistic profit expectations. In such a scenario, banks may be willing to grant new loans even beyond what was previously given as the maximum threshold of indebtedness they tolerated. On the other hand, however, this decreasing cautiousness on the part of both firms and banks leads to increasing financial fragility. In case of a light change in economic growth, this lack of cautiousness could lead to a major downturn caused by a chain of bankruptcies (Minsky, 1986 [2008]). Macroeconomic dynamics are then moving from a "debt-led" to a "debt-burdened" growth regime (Taylor, 2004). In the longer run, higher leverage ratios may therefore be associated with lower growth at the macroeconomic level (e.g. Steindl, 1952; Lavoie, 1995; Hein, 2006; Dallery and van Treeck, 2008; van Treeck, 2009).

3. FROM THE THEORY OF THE FIRM TO HISTORICAL MACROECONOMIC GROWTH REGIMES

After this general presentation of the different interactions among stakeholders' objectives, we now advance a schematic analysis of the two last stages of development of capitalism, making repeated use of Figure 1 above. In section 3.1, we study the managerial (or managed) capitalism which seems to have prevailed during the Golden Age of Capitalism, also called the Fordist era. In section 3.2, we will illustrate the micro- and macroeconomic dynamics implied by the new, finance-dominated capitalism.

3.1. The cooperative system of Fordism or managed capitalism

During the first three decades following the end of the Second World War, the industrialised countries established a sort of managed capitalism in which governments committed themselves to aggregate demand management and the welfare state. At the level of the firm, managers dominated the conflict with managers described above, and workers experienced a favourable bargaining position vis-à-vis capitalists. Shareholders played an essentially passive role in the potential conflicts with both managers and creditors, as sketched above.

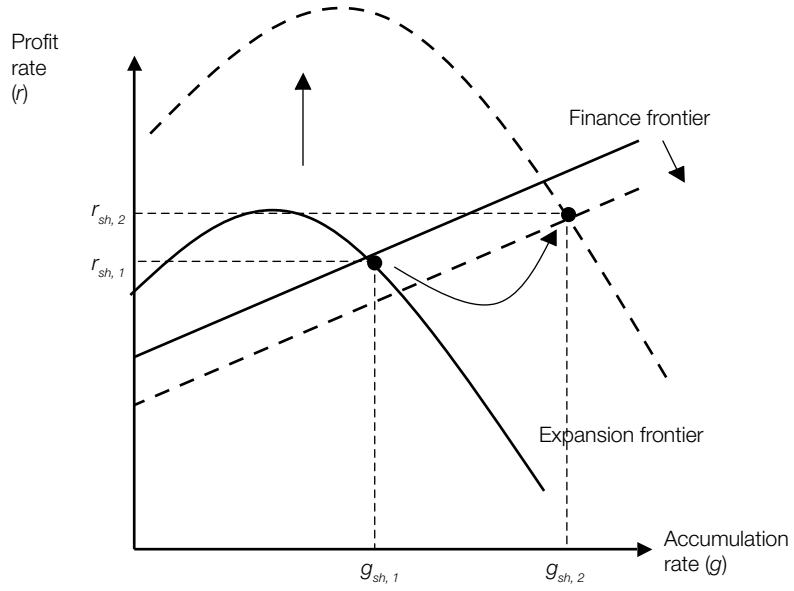
Although the Fordist firm formulates a growth target, the latter can be translated into an implicit profit rate target, r_{sm}, on the basis of Figure 1. In equilibrium, the individual firm decides to accumulate at the rate $g^* = g_{sm}$, with a profit rate $r^* = r_{sm}$ which finances and legitimates this accumulation goal. Now, if we make $r^* = r_{sm}$ a condition for long-run equilibrium, the question arises as to how firms react to deviations from equilibrium. In a series of contributions, Lavoie (1992, 2002, 2003) has argued that firms' profit target rate may adjust to the actual profit rate, as long as objectives are not met. Although Lavoie does not really provide a behavioural rationale for this adjustment process, in our view it reveals a managerial, or "Fordist", way of thinking the firm by which profitability objectives are subject to growth objectives, and where, according to Lavoie (1992, p. 107), "shareholders play a purely passive role". Following our notation in Figure 1, the adjustment process proposed by Lavoie can be written as:

$$\Delta r_{sf} = \Delta r_{sm} = \rho_1 (r^*_{-1} - r_{sm,-1}). \qquad (7)$$

According to equation (7), firms adjust their target rate of return, r_{sf}, to the actual profit rate allowed for by demand, productivity and distribution conditions (see equation 6). Combining this adjustment mechanism with our informal arguments from the previous section, the essential dynamics of Fordist growth can be described as follows (see Figure 2). Suppose there is a permanent increase in real wages, as workers' bargaining strength increases. At the microeconomic level of the firm, this implies higher costs and consequently, fewer profits. The opportunity frontier initially moves downward. But, at the macroeconomic level, the increase in real wages stimulates consumption, provided the propensity to save out of wage income is lower than out of profit income. When the economy is "wage-led", the expansionary effect of rising real wages overcompensates the contractionary effect of higher costs. Therefore, the opportunity frontier is now moving upwards. For a given accumulation rate, the individual firm is

Figure 2

The micro- and macro-economics of *managed* capitalism



Source: Dallery and van Treeck (2008).

more profitable than it previously expected. Then, managers will react by increasing investment, since this surge in profitability allows for new investment plans to be financed. Coming back to the macroeconomic level, this further nourishes demand, and, as a consequence, the opportunity frontier moves further upwards. At the end of this process, the realised profit rate is again equal to the target rate. Managers realise that a higher accumulation rate becomes possible, but that, seen from the financing side, this requires a permanently higher profit rate. Given that workers dominate the distribution conflict, the only way for firms to realise this higher required profit rate is to allow for an increase in the utilisation rate.[3] Of course, there may be some maximum utilisation rate that managers are willing to accept.

Note that the increase in growth resulting from the increasing dominance of workers in the distribution conflict is also likely to have implications for the finance frontier in terms of Figure 2 and the conflict over the financial structure among managers, shareholders and creditors. As discussed by e.g. Lavoie (1995), Hein (2006), Dallery and van Treeck

[3] As noted by Lavoie (2002, 2003) and Missaglia (2007, p. 79), the adjustment process described by equation (7) is stable because when firms revise upwards their target rate of return, the profit share increases and hence dampens the increase in the profit rate in a wage-led system.

(2008), under certain circumstances a higher accumulation rate is likely to be associated with a lower debt-to-capital ratio by firms, a result that is reminiscent of the macroeconomic "paradox of debt" highlighted by Joseph Steindl. Although individual firms take on increasing amounts of debt, the positive macroeconomic effects of higher investment spending on profits and capital stock are such that firms' actual leverage ratio declines (the d parameter in equation 5 goes down). The finance frontier in Figure 2 shifts downwards, allowing for a further rise in accumulation.

In the end, it seems that the macroeconomics of managed capitalism produces a virtuous circle of growth and profits. Moreover, these dynamics are "cooperative" since workers receive high wages, managers implement growth policies and shareholders experience high profits, while banks are content with relatively low leverage ratios of firms. Here, the cooperative nature of capitalism does not mean that everything is happening in a sort of perfect harmony: conflicts do happen inside firms. It only shows that the institutional configurations of managed capitalism (agreements on wages and growth) may lead to cooperative outcomes for the different stakeholders of firms. Whereas classes of interest seem to have ex ante divergent interests, the macroeconomic settlements of managed capitalism allow for an ex post partial reconciliation of these conflictive interests.[4]

This glorious image of cooperative capitalism has to be corrected somewhat if an overly idealised description is to be avoided. Concretely, there are different factors that limit the scale of the aforementioned dynamics. These limits are to be found in the traditional criticisms of Keynesian economics. First, the richer workers get, the more they save. Then, the macroeconomic positive effects of increased wages tend to be lowered by this weakened multiplier effect. Second, the reasoning was made in a closed economy for now. But, in the Post World War II period, globalisation led to an increasing openness of our economies. In a non-cooperative competitive world environment, the microeconomic negative effects of high wages (labour costs) may be stronger than the positive effects on demand due to the consumption of foreign goods.[5] Third, capital stock may have reached a size where additional capital goods may be less profitable. Graphically, the first two limits imply a downward shift of the opportunity frontier, while the third limit induces a steeper fall of the downward sloping part of the opportunity frontier.

These limits, as well as a revolution in ideology and politics, have contributed to a radical change in the institutional setting and macroeconomic dynamics in the industrialised countries starting in the beginning of the 1980s. These will be the subject of the next subsection.

3.2. **The conflictive system of financialised capitalism**

The Golden Age of Capitalism provided for cooperative results for different stakeholders

[4] As argued in Dallery and van Treeck (2008), an important element for the possibility of a (partial) reconciliation of conflictive objectives among different social groups is the assumption of an endogenous long-run rate of capacity utilisation.

[5] It can be objected to this criticism that the Earth as a whole is still a closed economy, and consequently it is wage-led.

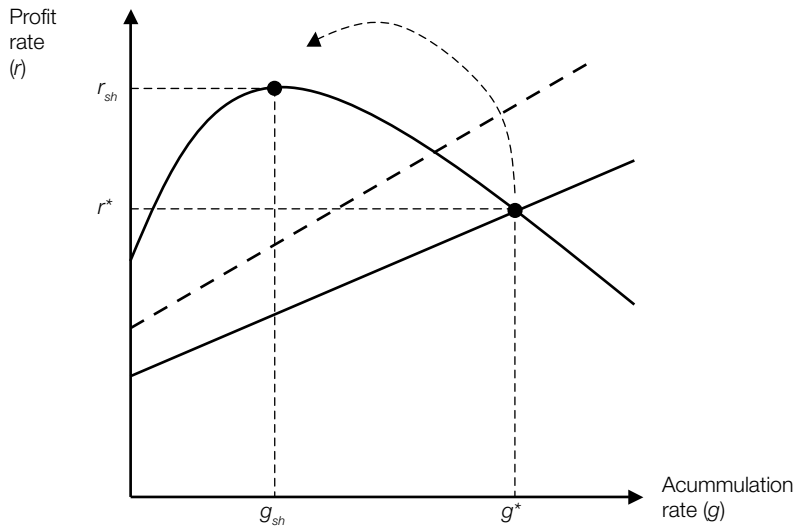
during approximately thirty years. By contrast, with financialisation shareholder value orientation has become the benchmark for corporate governance practices, and the objectives of other stakeholders within the firm have become subordinated to shareholders' interests. Somewhat paradoxically, the de-regulation of financial markets took place when everyone may have believed to take advantage from it: For workers, the increasing sophistification of financial markets emerged at a time where they were looking for places to invest their increasing savings; for banks, it offered new profit opportunities; for governments, it was the promise of an optimal financing of their growing debt; for shareholders, it was obviously the means first to come back to power inside firms (disciplining management) and second to succeed in imposing a new distribution of income and wealth at the macroeconomic level. Inside firms, the only group for which financial market de-regulation was clearly not in favour of its interest a priori (managers) was finally converted to it thanks to the new orientation given to their remuneration schemes. Indeed, managers saw their remunerations evolve from a growth-oriented to a profitability-oriented basis. The purpose of this revolution was to prevent managers from empire building and wasting firms' money through hazardous investments. The new dominant group inside firms (shareholders) established corporate governance rules that edicted the new business practises to be followed by managers: downsizing and concentration on the primary core activity, drastic selection of profitable investments, distribution of dividends, share buybacks, high leverage ratios, etc…

The microeconomics of this financialised capitalism can be sketched out within the diagram of the firm used in the previous section (see Figure 3). The new investment policy advocated by shareholders represents a move to the left along the expansion frontier. In other words, firms have to cut back investment plans in order to provide for higher profit rates. In a second step, these profits will be distributed to shareholders either through dividends and/or share buybacks. This leads to a counter-clockwise rotation and upward shift of the finance frontier in terms of figure 3 (x_s and s_f drop and d increases in equation 5). However, in our graphical example, the finance frontier is not binding for the new investment decision since we are above the finance frontier. This means that the targeted rate of profit would generate additional funds available to finance the distribution of cash flows to shareholders.

This representation of the new strategy of the individual firm seems a priori consistent with the stylised facts observed at the macroeconomic level where firms seemed to experience higher profit rates with declining accumulation. But, it should not be concluded too hastily from this a priori consistence that the macroeconomic divorce between accumulation and profits stems from a trade-off chosen by individual firms. Indeed, this consistence is far more complex and involves several macroeconomic composition effects. As noted earlier, when many firms decide to slow down accumulation, aggregate demand will be depressed, and therefore the expansion frontier will move downward (see Figure 4). In this case, the individual firm will not realise the expected profit rate that motivated its decision to cut down investment spending. Facing this disappointed expectation, firms' reaction could be a further reduction of investment,

Figure 3

The microeconomisc of *financialised* capitalism



Source: Dallery and van Treeck (2008).

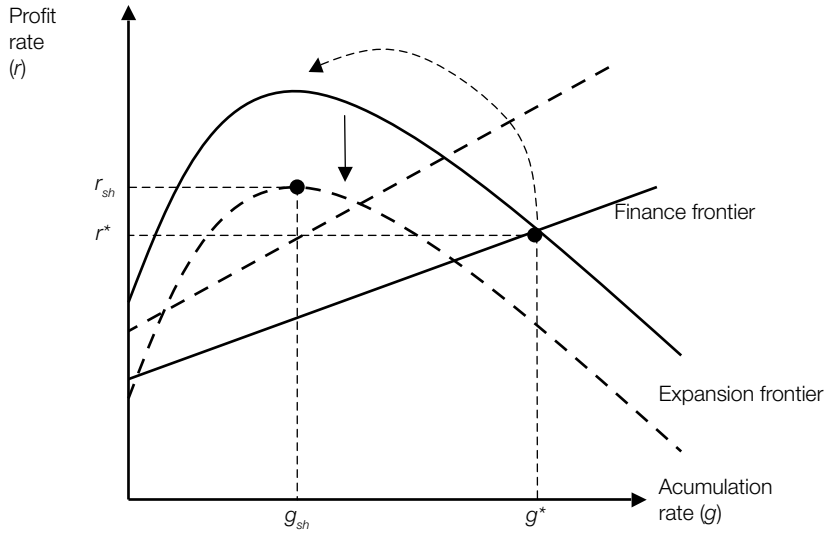
thus leading into a depressionary spiral at the macroeconomic level. On top of that, we must bear in mind that financialised capitalism has been linked to a very sluggish development of real (blue collar) wages. As such, real wage stagnation exhibits a contractionary tendency for aggregate consumption demand, which reinforces the depressing effect of the slowdown in accumulation. If, at the microeconomic level, wage moderation can be represented by an outward shift of the expansion frontier, the generalisation of this type of policies at the macroeconomic level affects profitability adversely through a reduction of demand and hence a downward shift of the expansion frontier. At first sight, financialisation should therefore be linked to a tendency towards depression because of the dominance of shareholders in the conflict with managers over accumulation policies and the redistribution of income at the expense of wages as a result of the deterioration of workers' bargaining position.

Nevertheless, when looking at reality, it seems that financialised capitalism has not been characterised by an implosion of our economies and both economic growth and firms' profitability have been relatively robust over the past decades. On the basis of our very simple analysis in this paper, the following explanation can be given (see Cordonnier, 2006; and Dallery and van Treeck, 2008, for more complete analyses).

Up to now, we have not taken into account the potentially expansionary effects

Figure 4

The micro- and macroeconomics of profit-seeking



Source: Dallery and van Treeck (2008).

of financialised capitalism. Particularly, we have not mentioned so far the positive aggregate demand effects of capitalist consumption and household indebtedness. As is well known, macroeconomic profits are given, by means of accounting, as:[6]

$$\Pi = I + C_C - S_W, \qquad (9)$$

where I is investment, C_C is capitalists' consumption and S_W is workers' saving. While financialised capitalism exhibits pressure on managements to contain the pace of firms' expansion, it also implies an increasing distribution of profits (which mechanically reduces private saving) and increasingly easy access to credit even for low income households (which is a means to increase consumption despite stagnating real wages).

In the present configuration of capitalism, shareholders seem to express very inflexible profitability claims. They expect firms to provide for some conventional level of financial profitability.[7] When real profitability appears unsatisfactory, firms make use of the leverage effect and distribute dividends and repurchase their own shares in order to satisfy shareholders. In Dallery and van Treeck (2008), we have proposed the

[6] Seen from the income side, the national product is the sum of wages and profits ($Y = W + \Pi$). Seen from the spending side, the national product is the sum of workers' consumption out of labour incomes, capitalists' consumption out of distributed profits and capitalists' investment ($Y = C_W + C_C$). Combining these two expressions immediately leads to equation (9).

[7] The most famous one is 15% Return on Equity (ROE).

following adjustment process as a description of firms' financial policies under financialisation:

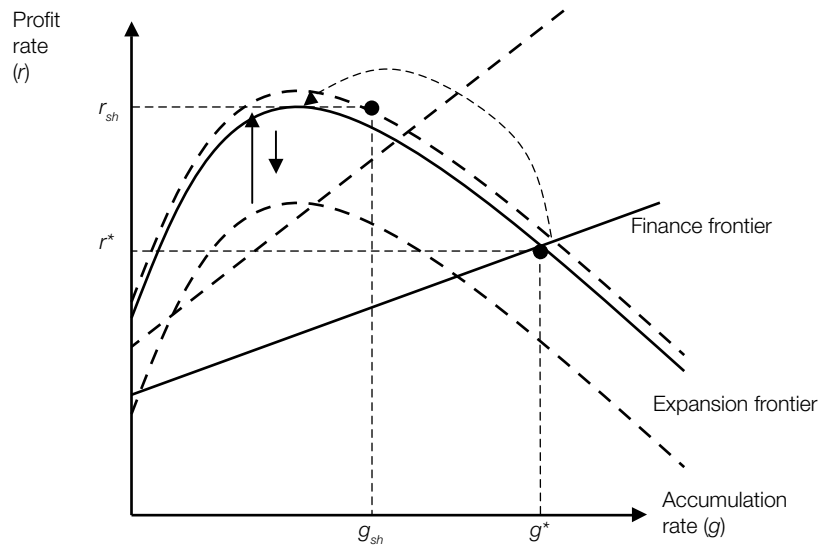
$$\Delta s_f = -\delta_2(r_{sf,-1} - r^*_{-1}), \quad (8)$$

where s_f is the share of profits which is retained by firms, and not distributed to shareholders in the form of dividends or share buybacks.

In the formal macro model developed in Dallery and van Treeck (2008), equation (8) serves to replace the adjustment process from equation (7) above to account for the regime shift from Fordism to financialisation. Here, we attempt to illustrate the logic of financialised capitalism graphically on the basis of Figure 5. First, the contraction of investment causes an economic downturn, as the expansion frontier of the representative firm shifts downwards. This induces pressures on firm's management willing to satisfy shareholders' claims at the microeconomic level. But then, firms increase their debt to pay shareholders their financial "due", and it is precisely these financial payments to shareholders which allow for a real economic recovery through consumption out of distributed profits and increasing stock market wealth. In other words, the measures taken to contain microeconomic financial pressures (rising leverage to satisfy shareholders' financial claims) lead to the resolution of these pressures at the macroeconomic level, in that aggregate demand is fostered through capitalists' consumption and the expansion frontier moves upward (Figure 5). Of course,

Figure 5

The macroeconomics of *financialised* capitalism



Source: Dallery and van Treeck (2008).

an additional, and perhaps even more important, element of debt-led growth may stem from credit-financed consumption by workers.

Note that in our simple example in Figure 5 the finance frontier remains non-binding, although firms' leverage ratio rises as firms increasingly pay out dividends and buy back shares. This process, however, may be limited by what we have called the shareholder-creditor conflict above: at one point, banks may find that firms' balance sheet have become overly fragile and revise their leverage target downwards. When this happens, the adjustment process proposed in equation (8) will come to a halt, and a financial crisis may result.

4. **CONCLUSIONS**

In this paper, we argue that the weight of finance in the economy, while governing firms' objectives at the microeconomic level, is key to understanding macroeconomic growth regimes in historical trends. Reconsidering the Post-Keynesian theory of the firm, we identify different stakeholders inside and outside the firm, and we assess their potentially conflicting objectives. Different macroeconomic growth regimes can be seen as characterised by the priority given to the realisation of the objectives formulated by the dominant stakeholder group.

Unlike managed capitalism where all the different classes of interest succeeded in partly reconciling their objectives in a kind of ex post cooperation, financialised capitalism is definitively conflictive in the sense that shareholders are the only class of interest to win in this institutional configuration. Their objectives are satisfied, but it induces that the other classes of interest do not meet their own objectives (especially workers). Hence, the price to be paid is very high: an increasing financial fragility for both firms and households. Indeed, this type of capitalism is sustainable only as long as banks are willing to grant loans i) to firms so as to distribute profits and feed capitalists' consumption, and ii) to households who are trapped in a debt-led consumption spiral due to wage moderation. The realisation of profits' expectations for firms (and the viability of the growth process) is thus dependent on banks' disposition to grant loans (Cordonnier and Van de Velde, 2008; Dallery and van Treeck, 2008). As the current economic and financial crisis has revealed, the debt-led dynamics described above have made financialised capitalism extremely fragile and hardly sustainable.

REFERENCES

Aglietta, M. (1976): Régulation et crises du capitalisme, Paris, Ed. Odile Jacob.

Bhaduri, A. and Marglin, S. (1990): "Unemployment and the real wage: the economic basis for contesting political ideologies", Cambridge Journal of Economics, vol. 14, 4: 375-393.

Boyer, R. (1990): The Regulation School: A Critical Introduction, Columbia University Press, New York.

Cordonnier, L. (2006): "Le Profit sans l'Accumulation: la Recette du Capitalisme Gouverné par la Finance", Innovations, Cahiers d'économie de l'innovation, 23: 79-108.

Cordonnier, L. and Van de Velde, F. (2008): "Financial Claims and the Glass Ceiling of Profitability", paper presented at the Workshop Financialization: Post-Keynesian Approaches, University of Lille 1.

Crotty, J. (1990): "Keynes on the Stages of Development of the Capitalist Economy: The Institutional Foundation of Keynes' Methodology", Journal of Economic Issues, 24(3): 761-780

Dallery, T. (2008): "Post-Keynesian Theories of the Firm under Financialization", paper presented at the Workshop Financialization: Post-Keynesian Approaches, University of Lille 1.

Dallery, T. and Van Treeck, T. (2008): "Conflicting Claims and Equilibrium Macroeconomic Adjustment Processes in a Stock-Flow Consistent Macromodel", IMK Working Paper, 9: 31.

Davidson, P. (1996): "Reality and economic theory", Journal of Post Keynesian Economics, vol. 18, 4: 479-508.

Dunn, S. (2001): "Uncertainty, strategic decision-making and the essence of modern corporation: extending Cowling and Sugden", The Manchester School, vol. 69, 1: 31-41.

Eichner, A. (1976): Megacorp and Oligopoly: Micro Foundations of Macro Dynamics, Cambridge University Press, Cambridge.

Epstein, G. (ed.) (2005): Financialisation and the World Economy, London, Edward Elgar.

Fama, E. F. (1980): Agency problems and the theory of the firm', Journal of Political Economy, vol. 88, 2: 288-307.

Galbraith, J. K. (1967): The New Industrial State. Harmonsworth, Pelican Book, Middlesex.

Hein, E. (2006): "Interest, Debt and Capital Accumulation - a Kaleckian Approach." International Review of Applied Economics, 20: 337-352.

Jensen, M. C. and Meckling, W. H. (1976): "Theory of firm – Managerial behavior, agency costs and ownership structure", Journal of Financial Economics, vol. 3, 4: 305-60.

Kalecki, M. (1954, [1965]): Theory of Economic Dynamics: An Essay on Cyclical and Long-Run Changes in Capitalist Economy, Monthly Review Press, New York.

Keynes, J.M. (1930): A Treatise on Money, two volumes, Macmillan, London.

——— 1936 [1997]: The General Theory of Employment, Interest, and Money, Prometheus Books, New York.

Knight, F. (1921 [1965]): Risk, Uncertainty and Profit, Boston, Harper and Row, N.Y.

Lavoie, M. (1992): Foundations of Post-Keynesian Economic Analysis, Edward Elgar, Aldershot.

——— 1995: "The Kaleckian Model of Growth and Distribution and its neo-Ricardian and neo-Marxian Critiques." Cambridge Journal of Economics: 19 (6): 789-818.

——— 2002: "The Kaleckian Growth Model with Target Return Pricing and Conflict Inflation." In Setterfield, M. (ed.): The Economics of Demand-Led Growth, Edward Elgar, Cheltenham: 172-188.

——— 2003: "Kaleckian Effective Demand and Sraffian Normal Prices: Towards a Reconciliation', Review of Political Economy, 15 (1): 53-74.

Marglin, S. and Schor, J. (Eds.) (1990): The Golden Age of Capitalism, Clarendon Press, Oxford.

Marris, R. (1964): The Economic Theory of 'Managerial' Capitalism, The Free Press of Glencoe, New York.

Minsky, H.P. (1986 [2008]): Stabilizing an unstable economy, McGraw-Hill Professional, New York.

Missaglia, M. (2007): "Demand Policies for Long-run Growth: Being Keynesian Both in the Short Run and in the Long Run?" Metroeconomica, 58 (1): 74-94.

OECD (1998): "Shareholder value and the market in corporate control in OECD counties", Financial Market Trends, vol. 69: 15–38.

Steindl, J. (1952): Maturity and Stagnation in American Capitalism, Basil Blackwell, Oxford.

Stockhammer, E. (2005-6): "Shareholder value orientation and the investment–profit puzzle", Journal of Post Keynesian Economics, vol. 28, 2: 193-215.

TAYLOR, L. (2004): Reconstructing Macroeconomics. Structuralist Proposals and Critiques of the Mainstream, Harvard University Press, London.

VAN TREECK, T. (2009): "A Synthetic, Stock-Flow Consistent Macroeconomic Model of Financialisation", Cambridge Journal of Economics, forthcoming.

WOOD, A. (1975): A Theory of Profits, Cambridge University Press, Cambridge.