Post-Keynesian Theories of the Firm under Financialization

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Abstract

Financialization is studied here from a microeconomic viewpoint. Following Stockhammer (2004a), the theory of the firm has been amended by introducing agency problems and class analysis between shareholders and managers. Further to that, I propose two alternative configurations for incorporation into the theory: the first views financialization as a constraint for the managerial firm, while the second discusses shareholders' interests and integrates them as an end in itself for the finance-dominated firm. My conclusions focus on finance-oppressed accumulation, financial fragility, and potential macroeconomic instability.

JEL classification: *D21, E12, G30*

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1. Introduction

The aim of this contribution is to question to what extent financialization modifies the post-Keynesian theory of the firm. Lavoie (1992) offers a synthesis of the firm's representation among post-Keynesians. Financialization, however, is dealt with as a minor issue not affecting the core of the theory of the firm. As far as we know, Stockhammer (2004a) and Crotty (1990, 1992, 1993) are the only post-Keynesians who propose a framework for the analysis of financialization's microeconomic implications.

At the macroeconomic level, much has been done to deal with changes brought on by financialization. Most of this literature posits the possibility of a broadly defined finance-led growth regime.[1] Though there seems to be some disagreement about which channel is

1. Finance-led growth comes from Boyer (2000) and it is a larger concept than the concept of profit-led growth one can find in Bhaduri et Marglin (1990).

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appropriate to capture financialization's effects, there is greater agreement about the relevance of finance-led growth. When looking at the three basic components of aggregate demand – investment, consumption, and government spending[2] – we might expect contrasting theoretical impacts of financialization on these components.[3] First, financialization may be assumed to depress accumulation,[4] but it may also be assumed that financialization fosters investment due to increased profitability that encourages firms to invest.[5] Second, financialization is also assumed to potentially boost consumption through either a credit-fuelled consumption, or a wealth effect (Boyer 2000; Maki and Palumbo 1990), or the real consumption of financial enrichment on the stock market,[6] or the consumption of increased distributed dividends (Cordonnier 2006). Once again, one can find the opposite, traditionally Keynesian arguments according to which financialization would slow down consumption through the channel of wage moderation. Third, and probably the most undisputed point, government spending is expected to be drowned out by financialization and those who advocate state withdrawal. Putting all these potential effects end to end, the conclusions of the financialization literature often assess the possibility of a finance-led growth regime in light of which positive and negative effects overcome the other ones. Indeed, some stylized facts about OECD countries over the last thirty years tend to recognize a declining trend in capital investment, but it is also empirically observed that consumption fed by finance remains the ultimate support for a low growth process, which is occasionally helped by the recovery of other components of aggregate demand within cyclical fluctuations.

It is rather astonishing that such a prolific literature never happened to question the microeconomic implications of financialization. I wish to extend Stockhammer's attempt to rebuild the post-Keynesian theory of the firm in the new context of financialization. My study of the post-Keynesian theory of the firm will especially focus on financialization's implications on investment decisions within the firm. I set aside macroeconomic considerations about finance-driven, credit-fuelled consumption or downsized public spending. Before devising a macroeconomic theory of accumulation under financialization, I want to establish the microeconomic theory of how financialization concretely affects the accumulation process within the firm. I do not want to choose a specific, definitive representation of corporate governance and agency problems between managers and shareholders.[7] So I will present the two extreme cases of the shareholder-manager power struggle. First, I present the case for a managerial firm with strong autonomy of managers over shareholders. Second, I present the case for fully-dominated managers in a shareholder-ruled firm. Following Stockhammer (2004a) and the works of James Crotty in several contributions (Crotty 1990, 1992, 1993; Crotty and Goldstein 1992), I try to advance the analysis of how

2. I do not study here financialization effects on international exchanges.

3. See Stockhammer (2007) for complete stylized facts on these different components.

4. See Stockhammer (2005-2006) who presents both microeconomic and macroeconomic implications. His conclusion stresses a decline in investment due to financialization. See also Hein and Van Treeck (2007).

5. It refers to the specification of investment function in Bhaduri et Marglin (1990).

6. Bhaduri et al. (2006) argue that at the macroeconomic level financial wealth cannot be converted to real wealth because the previous increase in equity prices would vanish if the prevailing winds turn to "sell" on the stock market.

7. Two reasons for this choice: first, the empirical evidence on this point must be inconclusive in that managers' autonomy is not observable; and second, managers' autonomy may be different in different firms depending on the structure and concentration of shareholding.

financialization affects the accumulation decisions of the firm, and get at the essence of managers' and shareholders' respective thought processes and their potentially different goals. At the difference of Crotty (1993) who addresses globalization through increased competition, I approach here globalization through its second dimension: the increasing power of finance.

The contribution is structured as follows. Section two presents the post-Keynesian theory of the firm and the framework proposed by Stockhammer (2004a). Section three offers an integration of financialization within the post-Keynesian theory of the firm where managers keep effective control of firms' objectives while facing an additional constraint due to shareholders' pressure. This would be consistent with the Galbraithian theory of the firm, and it would be very similar with the representation supplied by Lavoie (1992). Section four outlines the opposite case in terms of power struggle. Firms are managed for the exclusive sake of the shareholders' interests with purely passive managers. Section five deduces some potential macroeconomic implications of the microeconomic theorizing of financialization.

2. Accumulation Decisions in the Post-Keynesian Theory of the Firm

This section is based on various contributions by Stockhammer, who addresses the post-Keynesian theory of the firm from the financialization point of view (Stockhammer 2003, 2004a, 2004b, 2005-6). His work tries to improve the post-Keynesian theory of the firm found in Lavoie (1992) by introducing financialization concerns more broadly. In this section, I first present the initial thinking in the post-Keynesian theory of the firm. Then, I present the general model for a firm's decisions. Finally, I survey financialization as presented by Stockhammer.

2.1. The General Framework: The Galbraithian Theory of the Firm

Lavoie (1992) develops a seminal presentation of the post-Keynesian theory of the firm, originally presented by Wood (1975). Post-Keynesians are not interested in the study of small firms in a perfectly competitive market, and prefer to study big businesses in oligopolistic markets. Firms are price-setters in post-Keynesian economics. Prices are set up with long-term perspectives, and they are supposed to allow firms to achieve their objectives (in terms of profitability and market share) through a difficult balance-seeking between the need for high margins to finance investment and the need for low margins to capture demand.[8]

In post-Keynesian economics, firms are not assumed to maximize profits, as is clear in Lavoie (1992: 105): "The standard critique of the neoclassical theory of the firm is that profit maximization is not possible because of the lack of pertinent knowledge due to an uncertain environment. Profit maximization is then replaced by profit satisficing. Firms are assumed to set themselves threshold levels of profits; that is, minimum levels of profits or of rates of return." Furthermore, profits are not the ultimate objective for firms.

8. Firms increase the demand they face either at the expense of competitors or as the result of a growing market.

Profits are pursued for the achievement of the final objective, which is the firm's survival and the firm's increased power. Firms strive to ensure their own existence. To survive in a competitive world, one has to be powerful and to control one's environment. The best path to this remains growth. By means of growth objectives, firms spread their sphere of influence and reduce the uncertainty that weighs on their future. Profits are a prerequisite for growth because they release the financial constraint on accumulation. Wood (1975) linked the accumulation decision of the firm to its pricing decision through the determination of the profit margin. In this framework, firms have a target profit margin which permits them to grow at a certain rate, provided the retention ratio and the debt-to-capital ratio are judged safe. Firms seek profit because profit will allow them to grow.[9]

There is a bridge often built between this view of the firm and the view developed by Galbraith (1967). It is commonly accepted since the seminal works of Berle and Means (1933) that firms are sites of conflict between managers in charge of operating strategies and shareholders, who effectively own firms. These conflicts between control and property have already given rise to a huge literature related to principal-agent problems or more recently to debates about the new rules of corporate governance. Lavoie (1992: 107) rules out the ability of shareholders to influence the strategic orientation of firms: "In the Galbraithian and Post-Keynesian firm, shareholders play a purely passive role." This conception is inherited from a specific institutional configuration where shareholders were dispersed. They were not in a position to put their interest forward and make demands that it be satisfied. It was the era of the technostructure described by Galbraith. Firms were managed in the spirit of growth: control overcame property.

This theory of the firm seems to have come to an end in the early eighties. Since then, financialization has changed this rule of the game, and nowadays shareholders are able to make demands. This point of view is defended by some authors for whom capitalism has evolved from managerial capitalism to shareholder capitalism.[10] Though the theory of the firm by Lavoie (1992) was a priori perfectly relevant to managerial capitalism, it seems that major changes need to be incorporated into it when seeking a better fit with patterns of institutional change.

2.2. The Two Pillars of the Model of Accumulation

The model presented here is a very basic one and assumes away many complications. Its sole purpose is to clarify the issue at hand: how investment decisions are made. The model emphasizes two limits to investment plans. The first limit is a finance constraint on investment, and the second one is a limit on the profitability of investment. The key structure of the post-Keynesian theory of the firm can be found in Lavoie (1992). It can be pedagogically sketched out within 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. It means that profits are a prerequisite

9. Lavoie (1992: 106) tells us that: "Put briefly, growth is the objective, and profits are the means to realize this objective." In the new institutional configuration of financialization, it is often deemed that profits are no longer a means to an end but have become an end in themselves.

10. See Aglietta (1999), for example.

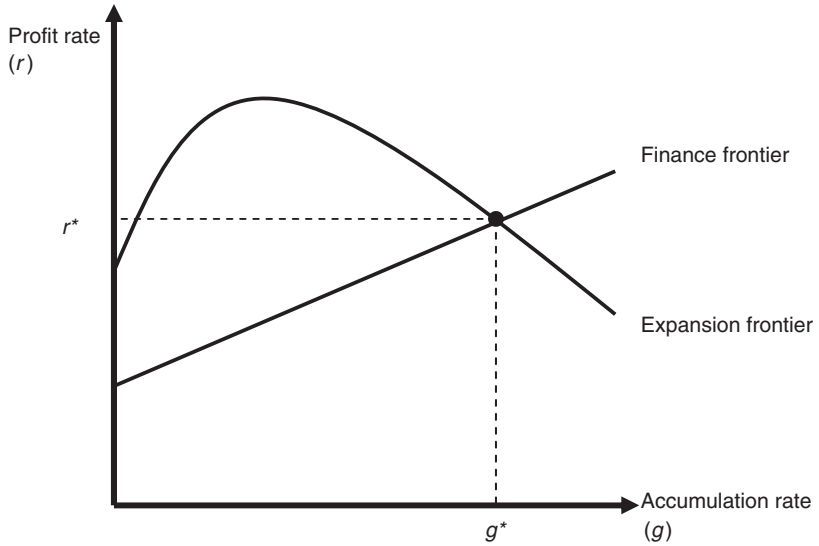

Figure 1.
The Representation of the Traditional Post-Keynesian Firm

for a firm desiring to invest. Profits are needed because they are a means to internally finance investment. At the same time, profits will be seen by banks as a sign of the firm's creditworthiness, and a profitable firm will also find it easier to raise funds by issuing new equities. The more profits you make, the more investment you will be able to undertake. Below is an expression of this finance constraint similar to Lavoie (1992: 111). Investment is less than or equal to the amount of internal finance plus the amount of external finance:

$$\begin{aligned} & I \leq IF + EF \\ & \Leftrightarrow I \leq (\Pi - i_s K_s - i_l K_l) + \rho(\Pi - i_s K_s - i_l K_l) \end{aligned} \tag{1}$$

The first parenthesis gives the amount of investment financed by retained earnings, which are profits minus dividend payments to shareholders and/or interest payments to lenders. The second parenthesis, that is external finance, is a multiple of retained earnings according to Kalecki's principle of increasing risk.[11] Building on this, I could formulate a linear expression of the finance frontier that gives the necessary profit rate r which allows the firm to grow at the rate g. But, here, I will follow a different path, which is more faithful to the pioneering work of Wood (1975). Originally, Wood (1975) expressed the finance frontier in terms of the minimum profit margin necessary to finance any given investment rate. Starting with the accounting equality of sources and uses of funds, I simply assert that the individual firm has to decide on its productive investment and its financial investment spending as a function of its retained earnings and the funds stemming from net new borrowing and net new issues of stock:

11. The more profits made by the firm, the more money the firm is able to receive from banks. Profits are a signal that reduces banks' risk in issuing loans to this firm.

$$\begin{aligned}&(\Pi - iD) + x_s I + x_d I = I + x_f I + (1 - s_f)(\Pi - iD)\\ &\Leftrightarrow s_f(\Pi - iD) + x_s I + x_d I = I + x_f I\end{aligned} \tag{2}$$

with s_f being the retention ratio, Π firm's profits, i the interest rate, D the stock of debt, I net physical investment, and x_s, x_d, and x_f stand for respectively net new equity, net new debt, and net financial investment, each expressed as a ratio of net physical investment. I 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):

$$\begin{aligned}&\pi = \frac{\Pi}{Y} = \left(\frac{I}{K}\frac{K}{Y^*}\frac{Y^*}{Y}\right)\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + \left(\frac{K}{Y^*}\frac{Y^*}{Y}\right) i \frac{D}{K}\\ &\Leftrightarrow \pi = \left(\frac{gv}{u}\right)\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + \left(\frac{v}{u}\right) id\end{aligned} \tag{3}$$

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 much 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, or if it finances a significant portion of investment either through net new borrowing or net new equity.

The profit margin is a key determinant of the pricing policy for the firm. Since the post-Keynesian firm is supposed to set prices using a cost-plus pricing procedure, one can derive the general formula for the mark-up pricing behavior of the firm as follows:[12]

$$p = (1 + m)\frac{w}{\mu} \tag{4}$$

where m is the mark-up rate, w labor costs, and μ labor productivity. In the absence of overhead labor,[13] it is possible to establish a simple relation between the mark-up rate and the profit margin:

$$\pi = \frac{m}{1 + m} \tag{5}$$

It follows that the finance frontier can be associated with the pricing behavior of the firm. The finance frontier gives the minimum profit margin necessary to secure investment, but at the same time, it is incorporated into pricing decisions. Seen from this perspective, the need to secure investment with high margins and the need to boost sales with low prices reappear conflictive. In the remainder of the paper, I will express the finance frontier in

12. It should be noted that I have only taken into account labor costs. This simplification may be defended by assuming a fully-integrated firm which does not have to pay for raw materials.

13. For an integration of overhead labor costs in the post-Keynesian framework, see the analysis of "cadrisme" in Lavoie (2006).

terms of profit rates in order to make it comparable to the expansion frontier, so that the finance frontier in (3) becomes:

$$r = g\left(\frac{1 + x_f - x_s - x_d}{s_f}\right) + id \tag{6}$$

The finance constraint now gives the minimum rate of profit necessary to implement any rate of accumulation. Graphically, on the right of the finance constraint, one can find the unsustainable area, where firms are going to face a drying up of means to externally finance investment (see Figure 1). It may be suggested that firms in these positions will be forced to sell liquid financial assets to balance their spending: x_f becomes negative (Wood 1975). By contrast, firms located on the left side preserve for themselves financing opportunities for additional spending.

The second component of the theory of the firm is called by Lavoie (1992) the expansion frontier.[14] 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. When the firm grows, there are positive effects on profitability but also negative effects due to the difficulties of assimilating profitable effects at a larger scale.[15] In the end, an increasing relation emerges between accumulation rate and profit rate, up to the accumulation rate that maximizes the expected profit rate, and beyond this point accumulation rate and profit rate are negatively related (see Figure 1). On the expansion frontier, firms profit from their investments as much as they could have expected. Below this frontier, firms are in a situation of inefficiency due to the misevaluation of investments, which turned out to be less profitable than they might have been. Excess capacity and over-investment may therefore be represented by the area below the expansion frontier where the firm operates below its standard rate of utilization, with a relatively high level of potential production compared to the effective level of demand. Formally, the logic behind the expansion frontier can be illustrated on the basis of the usual accounting decomposition of the profit rate:

$$r = \frac{\Pi}{K} = \frac{\Pi}{Y}\frac{Y}{Y^*}\frac{Y^*}{K} = \frac{\pi u}{v} \tag{7}$$

Along the expansion frontier, production efficiency is assured. That is, the firm operates at its standard utilization rate with a profit margin stemming from the firm's power on both the product market (the firm's competitive advantage) and the labor market (conflict with workers about wage bargaining).[16] What explains the shape of the expansion frontier is

14. Wood (1975) called it the opportunity frontier.

15. This relies on a Penrosean effect. As is clearly mentioned in Lavoie (1992: 115): "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 competition with other firms and increased selling costs such as for advertising.

16. Wage bargaining determines a macroeconomic component of the profit margin, and so I will not deal with it in this paper. See Dallery and van Treeck (2008) for a more complete analysis of conflict inflation.

thus the comparative strength of contradictory forces of accumulation on the microeconomic profit margin. For low accumulation rates, the firm is able to incorporate efficiency gains thanks to the implementation of new production technologies. Increased productivity allows the firm to improve its profit margin without raising its prices (see equations (4) and (5)), so that the profit rate goes up. 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 in order to remain at standard utilization. The position of the expansion frontier is explained either by the different rates of "standard" utilization accepted by the firm, or by the different macroeconomic influences on the profit margin stemming from conflicts with workers or the strength of competition on the market. An increase in workers' bargaining power or the intensifying of competition can lead to a reduced expansion frontier for the individual firm. Moreover, a firm with better technology enjoys a competitive advantage over its rivals, and this means that its expansion frontier will be located above those of its competitors. This firm will be able, for each rate of accumulation, to realize a higher profit margin compared to its competitors.

Combining the finance frontier with the expansion frontier yields Figure 1, which was first presented in a slightly different manner in Wood (1975: 83) and which is taken from Lavoie (1992: 117). In managerial capitalism, firms invest as much as allowed by the finance constraint and the realization of their profit expectations. Hence, the individual firm decides to accumulate at the rate g*, with a profit rate r* which finances and legitimates this accumulation goal. This representation of the post-Keynesian firm in the historical context of its birth constitutes the point of reference on which further developments will be based.

2.3. Stockhammer's Model

Following the presentation of the post-Keynesian theory of the firm and its application to managerial capitalism, the second part of this section tackles the issue of financialization within the framework proposed by Stockhammer (2004a).

Stockhammer retains many features of the previous theory of the firm, and adds a firm utility function, which reflects the power struggles between shareholders and managers. He assumes, for the sake of simplicity, that shareholders only aim at a profit rate while managers are only interested in the growth rate. He builds a utility function for the firm which depends on these two objectives, and of the respective ability of each class to impose on the other one its interests as the firm's goal:

$$u_f = u_f(g, r) = I^{\alpha} R^{\beta} \tag{8}$$

The firm's utility is then a function of the growth rate (g) and the profit rate (r) so as to take into account the two orientations desired by the two different actors of the firm. In other words, if managers were in a powerful situation towards shareholders, α would be high and the firm's policy would be based on a growth strategy. Contrariwise, if shareholders were in a better position, β would be higher[17] and the firm's strategy would be more

17. α would be lower because here it is assumed that α = 1 – β; that is, no provision is made for other stakeholders (workers, for example) to influence the firm's orientation.

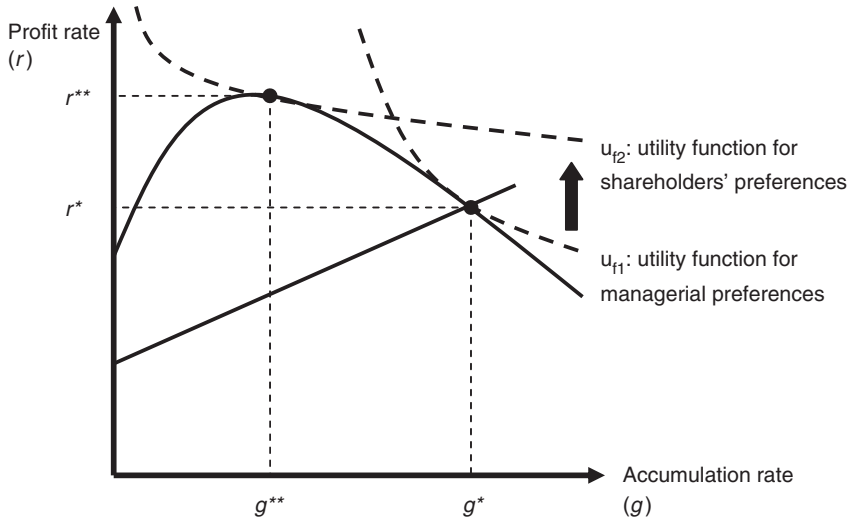

Figure 2.
The Post-Keynesian Firm under Financialization (Stockhammer's Case)

profit-seeking biased. Depending on the outcome of the power struggle between managers and shareholders, the policy conducted by the firm would be more profit- or growth-oriented, that is it would be more shareholder-satisfying or manager-satisfying.

In this framework, financialization leads to a change in the power struggle. Starting from a situation with powerful managers and growth policies by the firm, financialization implies a change in power relationships in favor of shareholders and profit-seeking policies (an increase in β). Shareholders are now in a situation that allows their interests to be satisfied. Graphically, the firm's utility function is moving upward (see Figure 2). If shareholders became powerful, they would be able to force managers to implement g**, the accumulation rate maximizing the profit rate. Due to the balance of power between the two classes, the firm's investment decision will be located somewhere between g* and g**. The more powerful the shareholders are, the nearer g** the firm's investment decision will be.

Such financialization leads to a decline in accumulation through productive investment, since shareholders are only interested in profitability at the expense of growth. A reinforcement of shareholders' power necessarily involves a drop in accumulation. As I see it, the drop in accumulation is an unavoidable outcome. The theory was constructed to produce this outcome, because what is at stake is the macroeconomic study, which has to match some stylized facts showing a slowdown in accumulation. The microeconomic theory arises in order to fit macroeconomic trends. But rather than go from macroeconomic laws to microeconomic theorizing, I prefer instead to first construct a microeconomic theory of financialization, and then see what happens at the macroeconomic level when applying that theoretical framework. For the sake of simplicity, Stockhammer assumes that shareholders are only interested in profit rate maximization. Yet shareholders' objectives are not so obvious to us anymore. It seems that the trade-off is not between profits and investment, or between profit rate and accumulation rate. The trade-off under study may be between today's profitability and tomorrow's profitability. Considering this trade-off

raises the puzzling question of shareholders' preferences in terms of accumulation, because tomorrow's profitability depends on today's accumulation (see section 4 for more).

In the remainder of this contribution, I try to develop two alternative ways to introduce financialization into the post-Keynesian theory of the firm. The first one probes the theoretical effects of financialization if managers keep the firm under their direction but face an additional constraint through shareholders' demands. The second one deals with the opposite case where shareholders run the firm in their sole interest. I do not want to assess the effective division of power between shareholders and managers. I simply hint at the possible theoretical effects on accumulation of two different cases: the case for semi-autonomous managers, and the case for total domination by shareholders.

3. Financialization as a Constraint: The Persistence of the Galbraithian Firm

This third section studies the impact of financialization on the Galbraithian firm, which is a firm in which managers still set the strategic orientation. For the purpose of this section, financialization will be viewed as a constraint on the firm's orientation. Managers do not want to bend their policy in favor of shareholders' interests, but they have to run their firm by taking into account this new constraint. The configuration is quite different from the one to be analyzed further in this article where shareholders reign. I first interpret financialization as a new constraint, and in the next section I take it as the emergence of a new objective in itself.

3.1. Financialization and the Increase in Dividend Payments

Financialization has numerous implications for the firm. Looking back at (2), financialization implies changes in both the sources and the uses of funds. Due to the new financial environment, firms may face greater pressure to distribute dividends (a lower s_f), an injunction not to issue new equity (a lower x_s) in order to preserve the market value of their stock, greater indebtedness (a higher d) following debt-financed expenditures (a higher x_d). Amongst all these potential effects, I will primarily focus here on higher dividend payouts.

Financialization as a constraint again raises the firm's financial structure. Shareholder value orientation implies that dividend payments increase, and the firm has to experience a lower retention ratio (see equation (3)). This new convention[18] arises from the new institutional context. In order to placate shareholders and to keep them quiet, managers have to distribute more dividends. This tendency is an undoubted fact about financialization. The ratio of dividend payments over profits has undergone a huge surge over the last twenty years. According to Cordonnier (2006), in France the ratio of dividend payments to net operating surplus[19] has jumped from around 30 percent from the end of the eighties to more than 80 percent at the very end of the nineties. For the United States, the boom was similar but it came earlier, since the ratio between dividends payments and after-tax profits went from nearly 40 percent during the 1960-1980 period to an average of 70 percent over

18. As widely noted dividend payments are a "convention" for J. Robinson (1964: 38).

19. This can be associated to $(1 - s_f)$ in my framework.

the period from 1982 to 2003. Cordonnier (2006) also reports the puzzling case where this ratio became superior to unity in the very first years of the 2000s in the United States. One has to bear in mind that in several cases firms had to borrow funds in order to distribute dividends. More widely, Crotty (2005: 99) shows that total payments to financial markets[20] as a percentage of cash flows for non-financial companies strongly increased since the beginning of the eighties. Whereas these payments as a percentage of cash flows used to fluctuate around 25-30 percent from the end of the Second World War to the end of the seventies, this ratio underwent a remarkable increase, often reaching 60 percent during the following years (1980-2001). These income redistributions led to a new sharing of wealth in support of profits, and especially of rentiers (see van Treeck 2008: 375-6). In France, the profit share in value added of the business sector[21] has gone from 30.2 percent between 1975 and 1984 to 38.3 percent between 1985 and today. In the same time, the rentiers' income share in GDP goes from 6.24 percent in the period 1970-1979 to more than 20 percent between 1990 and 1999.

Managers have to face this increased shareholders' pressure. In particular, they have to distribute more dividends if they want to preserve their autonomy in an environment that can threaten their decision making, and even their job (Crotty 1990). Indeed, disappointed shareholders may lead financial raids in order to install a new management more willing to meet their demands. This threat leads managers to accept the increase in dividend payments.

3.2. Financialization as a Constraint for Managers

For the purpose of this section, I will study the implications for capital accumulation of increasing payments to shareholders in the post-Keynesian theory of the firm where managers are facing shareholders' pressure as a constraint. Here, I do not assume that managers are fully converted to shareholders' interests. The new corporate governance rules and the new financial environment force managers to distribute more dividends, but I do assume that managers still have an objective of growth-maximizing for the firm because of their commitment to the long-term survival of the firm.

In my theoretical framework, as the variable for dividend payments to shareholders, that is $(1 - s_f)$, increases, it makes the finance constraint swing up toward the vertical axis (see Figure 3 and equation (6)). In other words, managers have to reduce their retention ratio on profit. The commitment to distribute more dividends yields to a tightened finance constraint. Moreover, I also need to take into account three other effects of financialization that potentially reinforce this movement. First, the firm is expected to increase its financial investment (x_f goes up in equation (6)); second, the firm has to reduce new equity issues, and even buy back its own shares (x_s drops and may even become negative); and third, the firm has to borrow more funds from banks to fund these changes (x_d goes up). This third effect pushes up indebtedness, so that debt load increases (d goes up), and it makes the

20. Total payments to financial markets are the sum of net interest, net dividends, and net share purchases. This measurement of financial redistribution of income deals with dividend payments, but it also takes into account share buybacks by firms. Crotty (2005) also shows that non-financial companies decided to buy back their own shares extensively (x_s becomes negative in the model).

21. In the model, it may refer to the profit margin π.

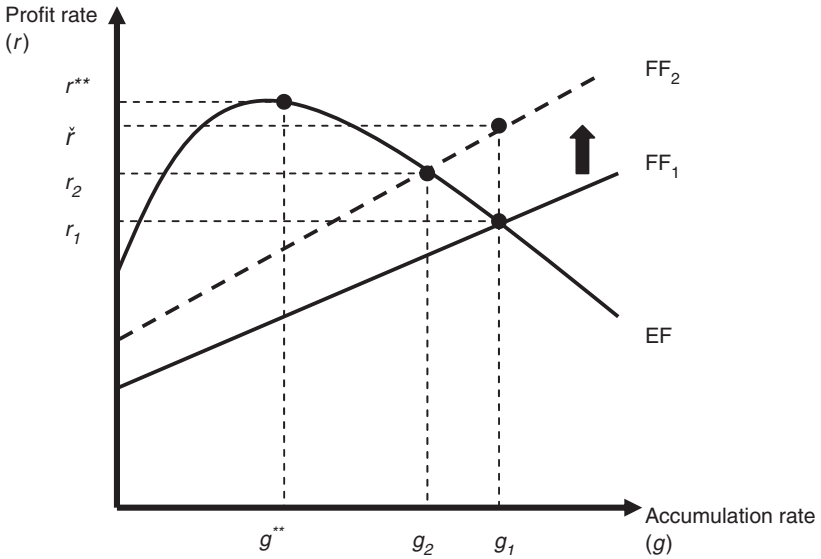

Figure 3.
The Galbraithian Firm and the Tightened Finance Constraint

finance frontier shift up. In short, if managers want to grow at the same rate, and if they are obliged to distribute more dividends than before in order to preserve the autonomy of their decision making (Crotty 1990, 1992, 1993; Crotty and Goldstein 1992), they have to reach a higher profit rate (margin) to finance their investment projects. In the era of financialization, keeping autonomy for managers' strategic policies implies more costs than before. The "growth-safety trade-off" (Crotty 1990, 1992, 1993; Crotty and Goldstein 1992) is reinforced: managers have to display more profits to increase safety for a given growth rate, or they have to lower investment to keep safety at the same level.

In this case, managers do want to go on growing at a rate g_1. But for this accumulation rate, the profit rate allowing the firm to get financing for investment goes from r_1 to ř due to the enforcement of the finance constraint. The problem is that this rate of profit cannot be reached, since it lies beyond the expansion frontier.[22] In brief, the demand for an increased profit margin to finance investment conflicts with the firm's selling its product with increased prices on a competitive market. The new profit rate necessary to finance investment exceeds the firm's productive efficiency. Even though managers are reluctant to modify their long-term investment planning, they cannot get out of it. Managers resign themselves to maximizing growth under a more stringent finance constraint. In other words, they choose to locate their policy at the intersection of the new finance frontier and the expansion one. Therefore the new policy implemented by managers will induce lower accumulation (g_2) and will still require a higher profit rate (r_2). To reach this higher required profit rate (r_2), at constant capacity utilization, competition, cost, and productivity conditions, requires a higher mark-up on prices, and hence a reduced accumulation rate (see equation (7)).

22. See Cordonnier and Van de Velde (2008) for a study of "profitability's glass ceiling."

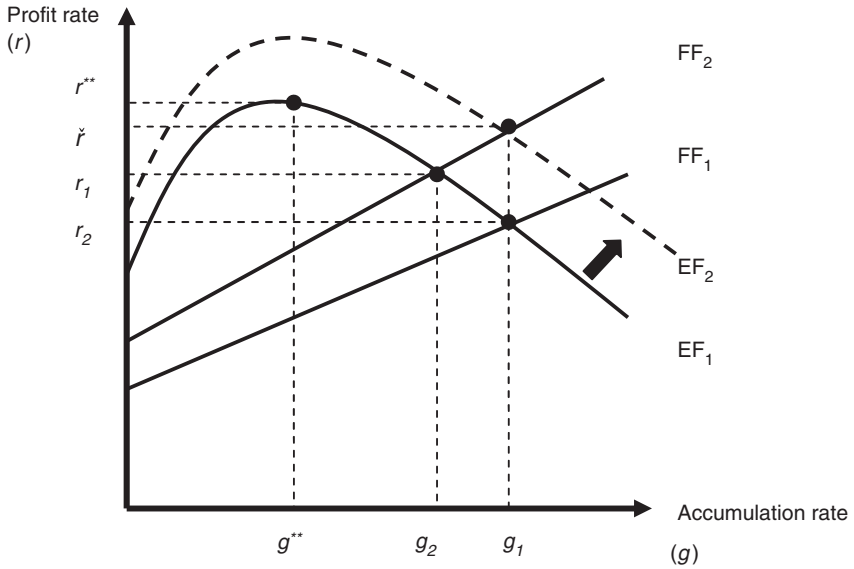

Figure 4.
Risk Transfers within the Galbraithian Firm

This way of theorizing financialization leads just as before to a decline in accumulation. But this time, this is as a result of a constraint, while previously, as in Stockhammer (2004a), it was a desired decline. Facing the new financial constraint of increased dividend distribution, managers have been obliged to reduce their growth objective in order to preserve their decision-making autonomy. A temporary solution might be to sell financial assets (x_f becomes negative in equation (6)) in order to release the finance constraint. But this solution is not sustainable, and the downward track of the finance frontier would be only temporary.

3.3. Risk Transfers as a Solution

My reasoning to this point has been applied to a constant expansion frontier. But this assumption could be relaxed if managers were allowed to reorganize their firm, so as to become more efficient and to improve the likelihood of expanded opportunity. Two types of policies may lead to an increase in the expansion frontier, corresponding to an increased profit rate which in turn comes either through a higher profit margin or a higher utilization rate, in each case for all rates of accumulation. The first type of policy involves the transfer of shareholders' pressure from managers to workers. The second type of policy implies an acceptance by managers of an increased real (as opposed to financial) fragility: it converts a financial risk into a real risk (Dallery and van Treeck 2008).

The first analysis deals with policies concerning productivity and wage pressure. According to this hypothesis, the expansion frontier can shift upward so that managers may keep their initial accumulation policy unchanged (see Figure 4). Such an occurrence is covered by risk transfer theory (Aglietta and Réberioux 2004; Crotty 1993). Facing a new constraint, managers try to shift the impact of change onto workers, so that shareholders' pressure appears as the workers' burden before being the managers' problem.

Here, labor market flexibility and financialization could be linked within the theory of the firm. Higher dividend payouts prevent managers from carrying out the accumulation policy they had previously established, but with flexibility managers succeed in achieving higher profit rates that enable them to finance their initial accumulation goal. In practice, managers will try to increase their profit margin at the expense of labor costs, to the extent that externalization or productivity enhances working conditions.[23] This increase in the profit margin with constant prices is only possible with productivity gains and/or wage reductions (see equations (4) and (5)).[24] As Crotty (1993) puts it, the fact that firms did not lead these profitable policies before does not mean that they were following irrational behaviors, and that they are now adopting rational behaviors. Indeed, firms are not led by profit maximization but by profit satisfying. Moreover these policies are risky and involve major costs. However, firms may be forced to implement such policies due to competitive regime shifts.[25]

The second means managers have for improving their expansion frontier is associated with an increased real fragility. An analysis of the profit rate shows three different ways it can increase: from a higher profit margin, a higher utilization rate, or a better capital coefficient (or some combination of the three). An example of combining improved margins with an enhanced capital coefficient is seen in the wage pressure and productivity policies alluded to in the previous paragraph. But managers may also try to provide this improved profit rate in the face of shareholders' demands through more intensive use of their productive capacities. In an environment of fundamental uncertainty, firms always keep excess productive capacity to be able to meet unexpected rises in demand. These reserves of production capacity can be likened to a sort of capital saving to deal with future uncertainty. Here, managers will have to accept operating above their desired rate of capacity utilization if it allows them to achieve a better profit rate. Managers have to trade off the shareholders' profitability target and their own utilization rate target (Dallery and van Treeck 2008). Consequently, the firm will be exposed to an increased risk of default in the event of an unexpected rise in demand; due to over-utilization of its productive capacity, the firm may not be able to supply its customers' demand. In turn, this could lead to a permanent loss in the firm's market share, because customers are assumed to have enough loyalty that they will not take their trade to firms that previously failed to satisfy them. This outcome seems consistent with the growth-safety trade-off used by Crotty (1990, 1992, 1993) or Crotty and Goldstein (1992). But here what is at stake is not only financial security. Managers do not adopt a policy only to seek autonomy. They do not try to meet

23. This profit margin increase is made at a given price level, in order not to lose market shares.

24. At this point, it is worth noting that this way of thinking is valid only at the microeconomic level. When all firms implement this type of policy by pressuring their workers, the macroeconomic effects of increased workers' insecurity and constrained demand are no longer certain compared to the expected benefits of firms' reorganizations. Therefore it is difficult to predict how the expansion frontier will move. The moral of the story is that an individual firm may fully benefit from flexibility, provided that the other firms do not apply these new organizational methods. This effect was neatly illustrated by Joan Robinson (1951: 135): "In a crowd, anyone can get a better view of the procession if he stands on a chair. But if they all get up on chairs, no-one has a better view."

25. Reference the "anarchic" regime of competition described in Crotty (1993) where firms are "coerced" to invest and adopt capital deepening. To paraphrase J. Robinson (cf. footnote 24 above): if they all get up on chairs, I have to stand on a chair to get a view of the procession, even though I did not want to get on a chair.

their financial commitments to creditors and shareholders only in order to preserve the autonomy of their decision making. In contrast with Crotty's trade-off, managers also try to balance their real security with their growth objective and the profitability requirements from shareholders. All these different objectives cannot be met at the same time, and managers will choose which one of these different objectives should prevail and which one has to be violated. Among these objectives, assume that managers will choose their growth objective. In the end, managers will be satisfied with the fulfillment of their accumulation goal, and shareholders will receive their claims on profits (dividends). But to reconcile these conflicting objectives (the growth-profit trade-off), managers will have to accept a higher utilization of the firm's productive capacity, which means that the firm will be more exposed to unexpected rises in demand (real fragility).

This last eventuality illustrates a different case of the post-Keynesian firm under financialization. Accumulation does not slow down, profitability increases, but the price to be paid is a greater pauperization of workers and/or an over-utilized production process with an increased risk of default in supply in case of unexpected rises in demand.

4. Financialization as an Objective in Itself: The Shareholder-ruled Firm

In this section, we explore the implications of financialization for the firm's orientation regarding capital accumulation if the firm is managed exclusively in the interests of shareholders. The previous section studied the case of Galbraithian firms in which managers maintain their control of strategic orientations in spite of financialization and moving frontiers. There, shareholder value orientation was only a constraint, but here it will become the prism through which the firm sees the world, the leitmotiv guiding the firm's orientation. Whether shareholders actually manage firms or actually succeed in imposing their objectives on management,[26] the purpose of this section is to see what would happen if firms were run exclusively in the shareholders' interest. Financialization is now seen as a change in objectives for the firm, not as a change in constraints. But we now have to ask what precisely shareholders' objectives are, and what the implications for investment are.

4.1. Profit Rate Maximization or Free Cash Flow Maximization?

Stockhammer (2004a) assumes for the sake of simplicity that shareholders are motivated by profit-seeking only. Owing to this abstraction, Stockhammer is able to draw his diagram and to model shareholder value orientation as a move towards profitability.

In this context, a shareholder-ruled firm would adopt the accumulation rate that would generate the maximum rate of profit. Coming back to Figure 2, this means that a shareholder-ruled firm would invest so as to grow at a rate g**, hoping for a profit rate r**. Shareholders are assumed to care only about the expansion frontier, and to choose the maximum point on it. They are not interested in the finance frontier, or the financial structure of the firm. But, in reality, it does not seem to work that way. Shareholders do make

26. The specific class nature of managers, as well as the nature of their objectives and their ability to impose them, is dropped in this section.

claims regarding the financial structure of the firm. Specifically, they will encourage a reduction of new equity issues (x_s drops in equation (3)) or they will advocate indebtedness beyond prudent limits to create the leverage effect (increase in both x_d and d equation in (3)). Hence, viewing shareholders only as profit-seekers seems to me an overly strong assumption.

In order to match precisely what could be the objectives of a shareholder-ruled firm, one has to more or less role-play by adopting the shareholders' viewpoint. One has to establish what makes one decision better than another in order to achieve one's interests. From this, it turns out that shareholders are not interested in profit maximization as assumed by Stockhammer (2004a). A first approach, then, to shareholders' objectives might assume that shareholders are more interested in maximizing free cash flow. As things are, shareholders own the firm and the firm owns the productive capital, but shareholders do not own the productive capital directly. So, shareholders do not want to maximize the whole amount of profits, but instead want to maximize the amount of profit they could demand back, that is to say, profits minus interest payments to creditors and minus investment. Then free cash flows are allocated to three types of spending: dividend distribution, debt repayments, and stock buybacks. Obviously, shareholders will encourage only dividend distribution and stock buybacks. As already noted, shareholders advocate the firm's indebtedness so as to benefit from the leverage effect and increase their profitability. Debt repayment being no longer a realistic use of free cash flows for shareholders, I also assume here that shareholders will only care about dividend payments: free cash flows are then associated with dividend payments only. One can argue that the discrepancy between these objectives (profit rate versus free cash flow) derives from the discrepancy between return on capital engaged (ROCE) and return on equity (ROE).[27]

$$\begin{aligned} ROCE = r &= \frac{\Pi}{K} \\ \Leftrightarrow ROE &= \frac{\Pi - iD}{K - D} = r + \frac{(r - i)D}{K - D} \end{aligned} \tag{9}$$

Here, it is clear that the firm may increase the financial profitability for its shareholders if it is willing to increase debt at low interest payments. As long as there is a positive gap between the economic profit rate and the interest rate, shareholders could encourage the firm to go more and more into debt, in order to benefit from leverage effects which increase the financial profitability. Indebtedness does not only affect the numerator, but the denominator as well. Indeed, shareholders may advocate, for a given capital stock, a reduction of owners' equity (total capital minus total debt) from stock buybacks (negative x_s in equation (3)) which will be financed by indebtedness ($x_d = - x_s$). Another possibility would involve attempts to reduce the firm's equity capital by selling assets (the firm with no factory). In either case, increasing the debt-to-capital ratio will reduce the denominator of (9) and augment financial profitability.

Whereas maximizing ROCE means finding the accumulation rate that will maximize the profit rate (r**), maximizing ROE means, in this instance, finding the accumulation

27. The distinction is then between economic and financial profitability. See Batsch (2002: 81) for more about this point.

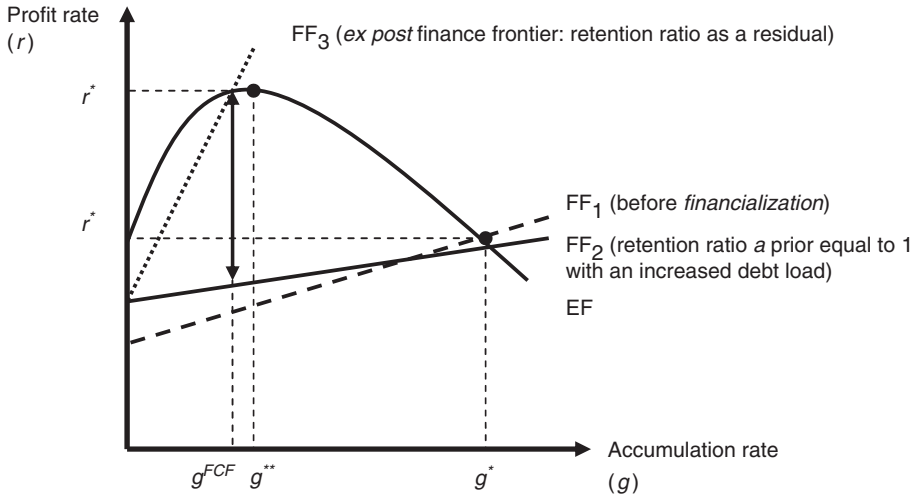

Figure 5.
Free Cash Flow Maximization

rate that will maximize free cash flows (for dividends), that is, maximizing the gap between the finance frontier[28] and the expansion frontier for a given accumulation rate. Shareholders are thus trying to maximize free cash flows, as expressed in equation (10):

$$\begin{aligned} & FCF = \Pi - iD - s_f(\Pi - iD) = \Pi - iD - I(1 + x_f - x_s - x_d) \\ & \Leftrightarrow \frac{FCF}{K - D} = \frac{(1 - s_f)(\Pi - iD)}{K - D} = (1 - s_f)ROE \\ & \Leftrightarrow \frac{FCF}{K} = r - id - g(1 + x_f - x_s - x_d) \end{aligned} \tag{10}$$

If I refer to the ratio of free cash flow to owners' equity, I can state that shareholders claim both high financial profitability through leverage effects and a high dividend payout ratio. If I refer to the ratio of free cash flow to total capital, I notice that this ratio is consistent with its definition as the difference between the expansion frontier rate of profit and the finance frontier rate. In Figure 5, one can see that the accumulation rate which maximizes the profit rate (g**) is different from the accumulation rate which maximizes the gap between the finance frontier and the expansion frontier, which is the accumulation rate that maximizes the free-cash-flow-to-capital ratio (g^{FCF}).

28. In the case of a shareholder-ruled firm, the finance frontier cannot be known a priori since the retention ratio will be determined ex-post as a residual. The maximization of free cash flows implies a joint maximization of profits and the rate of profit distribution (the payout ratio being the complement of the retention ratio). In fact, I am obliged to assume in a first step that the retention ratio is equal to one (no dividend distribution). Compared to the previous case of the managerial firm, this means that the finance frontier is flatter (though still shifting up because of increasing debt load). In a second step, depending on the actual profit rate, shareholders will claim dividend payments as a share of this profit rate, and this is what will determine the actual retention ratio as a residual. Finally, I can represent an ex-post finance frontier which incorporates this retention ratio (see Figure 5).

If shareholders effectively ran the firm in order to maximize the free cash flows that will be claimed back through dividend payments, the accumulation rate undertaken by the firm would be below the one that maximizes the gross profit rate.[29] Compared to the situation where managers effectively run the firm via growth-seeking policies (g*), the drop in accumulation is then even larger than the one created by shareholder value orientation policies as in Stockhammer's framework (g**). If one agrees with the maximization of free cash flows being shareholders' absolute objective, one must expect a huge slowdown of accumulation.

4.2. Shareholders' Wealth Maximization

When looking at injunctions issued from new corporate governance, one can find out another way to describe the theoretical objectives of shareholder-ruled firms. A widespread assertion refers to the need to "create shareholder value." Here, my hypothesis will be that a shareholder-ruled firm tries to maximize the creation of value for its shareholders through the maximization of the firm's value on the market.

For the purpose of this section, I will adopt the purest theory of shareholders' value creation. I assume the general efficiency of markets in equilibrium within the capital asset pricing model (CAPM), and try to find out what the best policy for shareholders would be. Using this traditional theory of the equity market, one can derive the equation giving the value of the firm:

$$V = \sum_{t:0}^{\infty} \frac{FCF_t}{(1 + r_s)^t} \tag{11}$$

The value of the firm (V) is nothing other than the sum of its present-discounted future free cash flows (FCF_t). The discount rate (r_s) is equal to the rate of return prevailing at market equilibrium. Using the definition of free cash flows as the difference between the gross profit rate and the finance-constrained profit rate, and assuming that free cash flows grow at the same rate as the capital stock (g),[30] and that the growth rate (g) is less than the present-value discount rate (r_s), the previous equation can be restated solely as a function of today's free cash flows:

$$V = \frac{\Pi - I(1 + x_f - x_s - x_d) - iD}{r_s - g} \tag{12}$$

Dividing (12) by the total capital of the firm K gives the per-share value of the firm:

29. The accumulation rate allowing for the maximization of free cash flows (g^{FCF}) is located at the point where the slope of the expansion frontier becomes equal to the slope of the finance frontier. Provided that the initial slope of the expansion frontier is greater than the finance frontier's (which must be positive), the accumulation rate that maximizes free cash flow will always be located to the left of the one which maximizes the profit rate; that is, the decreasing slope of the expansion frontier will first be equal to the slope of the finance frontier before being equal to zero (r**).

30. In this case, the sum of cash flows is the sum of a geometric series.

$$v = \frac{r - g(1 + x_f - x_s - x_d) - id}{r_s - g} \tag{13}$$

This equation makes clear why shareholders should not be interested only in the firm's profit rate (r) when attempting to maximize the firm's value per share. The usual assessments advanced in shareholder value creation tend to be limited to maximizing the numerator: the requirements on the firm are a high profit rate or a low growth rate, or a low interest rate. This view neglects the role of the denominator in determining share price. By looking closely at the denominator of (13), the striking point is that the firm's growth rate has a positive effect on share value. As a consequence, shareholders who try to maximize the firm's value should not focus on the profit rate at the expense of accumulation. In other words, though shareholders aim for a firm's value maximization, they cannot escape the growth-profit trade-off, despite the assertions of Stockhammer (2004a). A shareholder-ruled firm will pursue neither the accumulation rate that maximizes the profit rate (g^{**}), nor the accumulation rate that maximizes the cash flows (g^{FCF}). It will instead attempt to choose the accumulation rate that maximizes the firm's value.

This outcome emerges from a very specific set of assumptions. Here shareholders are supposed to maximize the firm's value on the market over an infinite time horizon. For this reason they need to take into account the growth rate for the firm. But if we assume that shareholders try to maximize the firm's value on the market over a shorter time horizon, the growth rate can be ignored, as was the case where shareholders only wanted to maximize today's free cash flows.

4.3. The Absence of Relevant Knowledge

Nevertheless, the growth rate that maximizes the firm's market value is far more uncertain than the other ones. It fluctuates greatly for minor changes in the value of the parameters in (13), and especially the value of the standard rate of return at market equilibrium (r_s).[31] This equilibrium rate of return is defined as the rate of return on equity for a firm (ROE) expressed as a function of the rate of return on a risk-free asset (i)[32] plus a risk premium (ψ) specific to the firm. Bear in mind that this formula is based on market equilibrium.

$$ROE = i + \psi \times (r_s - i) \tag{14}$$

In the final analysis, the maximization of the firm's market value is extremely sensitive to and dependent on several variables totally beyond the firm's control, so that it becomes nearly impossible to determine a rate of accumulation that would maximize the firm's market value. Instead, one may assume that firms act conventionally by following rules of thumb. This type of rationality suggests satisfying rather than maximizing behavior. By adopting a threshold level established as standard by market convention, firms attempt to

31. For a definition of r_s, see the capital asset pricing model (CAPM) as presented in Aglietta and Rebérioux (2004: 25).

32. Here the risk-free asset may be government bonds, and the interest rate on government bonds is expected to be the same as the one prevailing on the credit market.

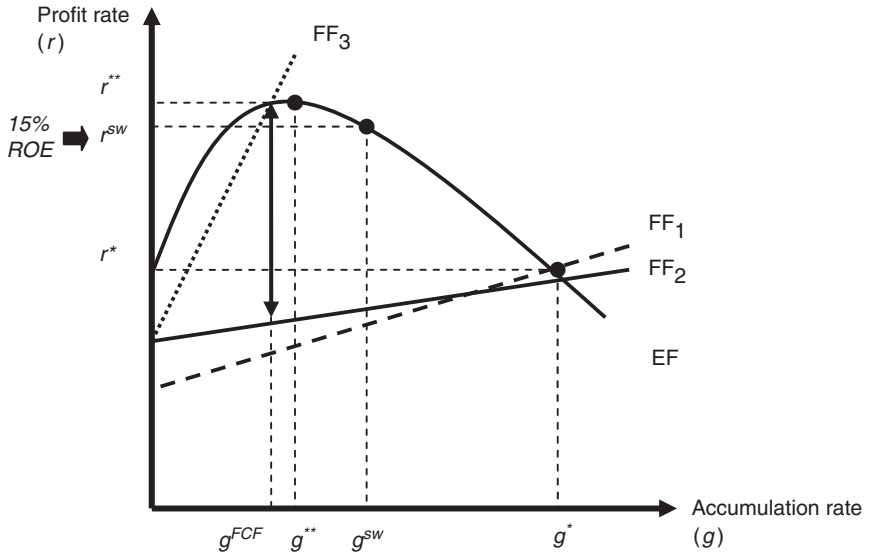

Figure 6.
Shareholder Wealth Maximization

lift the veil on management by shareholder-value-maximization. When firms target the well-known 15 percent ROE,[33] they are not maximizing shareholder value creation, but choosing an objective that merely approaches the final objective of maximizing shareholder value. Firms do not really know how to maximize shareholder wealth, but they know that displaying the 15 percent ROE (or more) will send the signal that they are willing to maximize it. This policy does not actually maximize shareholder wealth, but it has emerged as the convention that signifies the firm's approach towards shareholder value maximization. Graphically (see Figure 6), one can observe this proximity between the accumulation rate that maximizes free cash flows (g^{FCF}), and the accumulation rate that tries to maximize shareholder wealth by targeting the standard conventional level of ROE (g^{sw}).

The firm's objective of market value maximization requires taking growth into account. Even when dealing with the purest shareholder theory of the firm, one needs growth. When shareholders act in order to maximize their wealth, they do not maximize free cash flows,[34] but try to accommodate the firm's growth, since growth also matters in the firm's financial valuation.[35] Today's growth remains a prerequisite for tomorrow's profitability, which in turn determines today's firm valuation on the market. The implementation of shareholders' maxims is not a sort of clearance sale of managerial corporate governance principles, as growth is still needed to support shareholders' interests. In trying to reach their objectives, shareholders have to rely on managers, whose great skill is to

33. This 15 percent ROE may constitute the kind of "financial norm" Boyer (2000) was alluding to in his paper. References to this convention may be found in numerous annual reports for large corporations: Axa, Michelin, Schneider, etc. These firms, despite their great differences (insurer, tire manufacturer, electric equipment manufacturer), promised their shareholders the same return (Batsch 2002).

34. In other words, they only try not to maximize the numerator of (13).

35. This appears in the denominator of (13).

implement growth policies. There is a theoretical convergence of interests between managers and shareholders if one approaches shareholders' objectives as the maximization of the firm's market value. But the convergence I am talking about is not the one so often described in the corporate governance literature. We are not dealing with the convergence of managers' interests towards shareholders' on account of stock options or other profitability-related compensation plans. The convergence I stress in this section runs the other way: a convergence of shareholders' interests towards managers'. Indeed, what I show is that shareholders should care about growth if their objective is the firm's market value maximization. I just do not assert that shareholders care about growth in practice.

In summary, the shareholder-ruled firm exhibits two different configurations, in which shareholders aim to maximize either free cash flow or stock value. The first case seems to treat shareholders as short-term rent-seekers who are slightly involved in several firms (because of the diversification of their portfolio) and who do not care about the long-term survival of these firms. They are only interested in short-term financial performance, and hence they can advocate high leverage ratios to generate more profits without being worried by financial fragility. The second case is characterized by shareholders who are more deeply involved in the firm's long-term interest, and hence care about growth. This is what underlies shareholder activism. In fact, one can draw a sharp distinction between shareholders interested in enhanced income from dividend payments (free cash flows), and those interested in the asset appreciation from increased stock value.

5. Conclusion

What has been attempted in this article is to make sense of the implications of financialization for the investment decision within the post-Keynesian theory of the firm. The concern was not to assess the most accurate configuration of firm theory in the context of financialization. It was rather to provide the two polar cases of possible theoretical implications of financialization for the purpose at hand. Depending on different rules of corporate governance and on shareholders' goals, financialization will have different effects for the individual firm, and beyond that will lead to different macroeconomic growth regimes. My conclusion also suggests that the post-Keynesian theory of the firm is able to adapt itself to institutional transformations, since I have shown that it is possible to introduce financialization within the framework of the post-Keynesian theory of the firm.

The introduction of financialization within the post-Keynesian framework of the theory of the firm was first considered by Stockhammer (2004a), who derived his theory from the seminal work of Lavoie (1992). Stockhammer's contributions highlighted power struggles within the firm and their consequences for the firm's accumulation policies. Then Stockhammer built a macroeconomic closure for his model where the microeconomic, theoretically explained slowdown of capital accumulation is put against some stylized facts about financialization, and especially the macroeconomic trend of a drop in investment (coming along with a profitability recovery). As Stockhammer sees it, capital accumulation (and profitability) at the macroeconomic level has lessened (has increased) because firms at the microeconomic level have desired to invest less accordingly to the growth-profit trade-off.

In this paper I have tried to tell different stories about why firms at the microeconomic level have decided to invest less. Whether a firm's orientation is decided by managers under shareholders' pressure or by shareholders themselves, financialization effectively leads to a decreasing tendency to accumulate. In this, I agree with Stockhammer's findings. But I have attempted to detail the process that produced this outcome. Accumulation decisions within the firm interact with other targets. On the one hand, managers do not blindly pursue growth, and they also care about target utilization rates and the indebtedness threshold. On the other hand, shareholders are not only motivated by profit rate; they are also concerned with debt-leverage and growth. The model under study makes it possible to deal both with managers who behave differently due to their different sensitivity to contradictory targets (growth, utilization, debt), and with shareholders who advocate different policies due to different targets stemming from different time horizons. What I have shown is that financialization taken as a constraint for managers entails a relatively small drop in accumulation, and it could even lead to a constant accumulation through increased pressure on workers and/or increased real fragility. Considering the opposite case where shareholders preside over firms' fates, I find that the decrease in accumulation is far greater, but the scale of this reduction is dependent on what is assumed to be shareholders' objectives and time horizons (the longer it is, the more need for growth). The way financialization has been presented here offers a theoretical representation of the historical change in corporate governance, "from an orientation towards retention of corporate earnings and reinvestment in corporate growth through the 1970s to one of downsizing of corporate labor forces and distribution of corporate earnings to shareholders over the past two decades" (Lazonick and O'Sullivan 2000: 13).

The microeconomic implications of financialization for the theory of the firm need to be integrated with the macroeconomic story of financialization. As opposed to the mainstream view of profits as the necessary and sufficient condition providing a maximization of social well-being, here I suggest that profits may be too high for the health of an economy because of the sacrifices implied by such profits (sluggish accumulation, depressed wages, rising indebtedness, and financial fragility). My findings suggest a drop in accumulation that confirms the usual macroeconomic assumption about financialization's effects. Aggregate investment is expected to decrease due to financialization, and other things being equal, this would lead to economic contraction. Another point to be mentioned about the macroeconomic closure is that the situations presented here could occur only under the implicit condition that firms would experience the higher profit rate they expected when they decided to decrease their accumulation rate.[36] In fact, the microeconomic profit rate of a firm depends on the macroeconomic accumulation rate of the other firms. If other firms decided to cut their investment outlays, the individual firm would experience difficulties in reaching the profit rate that justified its accumulation drop, because the expansion frontier would be moving downward. This then opens the way both to real instability with ever decreasing expansion frontiers and ever depressing investment decisions, and to financial instability with ever increasing debt load and financial risk of default. Moreover, it should be kept in mind that the positions of the two frontiers are

36. This ex post confirmation of ex ante expectation is no longer certain when, as seems to be the case, financial requirements are above the "glass ceiling" of profitability. See Cordonnier and Van de Velde (2008).

based on subjective factors, such as managers' optimism about investment profitability for the expansion frontier and managers' sensitivity to financial risk for the finance frontier. It goes without saying that both factors are likely to generate cyclical real as well as financial fluctuations, depending on optimism and caution.

But as far as financialization is concerned, other things are not equal. Regarding financialization at the macroeconomic level, the question to be asked is whether the positive effects on consumption through dividend payments, credit, and financial wealth overwhelm the negative effects on investment. If the answer is no, there will be no room for finance-led capitalism and the economy will experience instability. If the answer is yes, finance-led capitalism could emerge successful. Several studies notice the divorce between accumulation and profitability that has been witnessed in many countries (van Treeck 2008, 2009; Hein and van Treeck 2007). In brief, these considerations can be explained by what Cordonnier (2006: 89) calls the "extended Kalecki's law." Accumulation may slow down simultaneously with profitability increases if capitalists' consumption increases (higher dividend distribution and higher propensity to consume out of dividends) and if household consumption also increases (despite wage moderation but thanks to rising indebtedness). These key features of post-Keynesian economics provide a solid theoretical explanation of recent stylized facts of finance-led capitalism at the macroeconomic level. And they can also provide a rationale for persistent slackness in investment without global depression.

The financialization literature often tackles the theoretical conditions whereby finance-driven consumption might allow a recovery of profitability. My work tends to offer a reappraisal of the theoretical background for finance-oppressed investment. The finance-led capitalism debates have to rely on this confrontation of financialization's two sides. From that perspective, the present contribution's approach to financialization supplements an under-studied field.

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