CAPITAL ACCUMULATION AND CORPORATE PORTFOLIO CHOICE
BETWEEN LIQUIDITY HOLDINGS AND FINANCIALISATION

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Abstract

Most models of investment decisions utilised in macroeconomic models take free or perfect competition as explicit or implicit assumption. However, the oligopolistic structure of most real markets lead to corporate strategic behaviours that can produce very different results. Strategic decisions, connected with agency problems, can play a major role in producing financialisation and timing the rhythms of real investment.

The paper deals with both mainstream and heterodox contributions that analyse the effects of corporate governance and strategic behaviours on portfolio management and investment decisions in big corporations, seeking to determine how these effects might play a major role in producing growing liquidity holdings and financialisation. The main objective is to understand whether these models can explain the tendency to place growing shares of social surplus in speculative financial channels, thereby contributing to long-term real stagnation.

Keywords: Investment theory, Interest Rate, Corporate Savings, Financialisation, Financial Crises.

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1. Introduction

One of the major movers, if not the prime mover, of the modern process of economic growth is, as everybody knows, capital accumulation, which ultimately depends on the share of social surplus devoted to investment. In capitalist economic systems, moreover, profits are the main part of social surplus on the income distribution side, and thus they are also the most prominent source of potential investment in new capital goods.

Unfortunately, in the past fifty years the investment/profits ratio has shown a declining trend (Stockhammer, 2006). Since the late 1980s, however, non-financial corporations, while reducing their accumulation of capital goods, have progressively increased their financial investment (Stockhammer, 2004).

Thus, it becomes important to understand whether there is a connection between decreasing real investment and growing financialisation by non-financial corporations. Unfortunately, investigation into this potential connection is made very difficult by the present weakness of investment theory.

In fact, even though trends over time and volatility of aggregate investment in fixed capital should be central to understanding aggregate fluctuations in economic activities, investment theory has been traditionally weak on these matters. Moreover, in the early 1960s Jorgenson had already noted there was a great gap between economic theory and econometric practice in the literature on business investment in fixed capital (Jorgenson, 1963). Econometric models, indeed, are often a simply attempt to find empirical correlations between aggregate investment and other economic variables, sometimes without any rigor in the underlying theoretical foundations.

Obviously, as physics shows, mass phenomena can usually reveal rules of aggregate functioning that cannot be easily reduced to atomistic behaviours. However, physicists can discover these rules with empirical experiments in the lab. Unfortunately, things in economics are more complex, because economic phenomena cannot be reproduced in labs and empirical rules can be discovered only by measuring ex-post statistical correlations, which may often be interpreted in various ways and by means of different causal relationships. Moreover, some variables, like interest rates and investment decisions, can act on each other through different mechanisms, producing contradictory net effects.

For a long time economists have been trying to explain the aggregate investment demand empirically simply by using scale variables. The most famous attempt of this kind, as is well known, is the accelerator model by Clark (1917), built on the basis of the relation existing between the first differences of a simple fixed coefficient inverse production function. However, despite the empirical success of this model, since the late 1960s there have been many attempts to introduce the cost of capital as explanatory variable in econometric models specified starting from the optimisation problem of a perfectly competitive firm (Hall, Jorgenson, 1967).

Meanwhile, other economists highlighted the predominance of liquidity variables over the interest rate for short-run investment, introducing elements of portfolio choices into the investment theory (Tinbergen, 1939; Meyer, Kuh, 1957). Subsequently, according to the Tobin approach, investment has been recognised as an increasing function of $q$, the ratio of the financial value of the firm to the market cost of its capital.
goods, which is, in fact, closely connected to the companies’ rate of profit (Brainard, Tobin, 1968; Tobin, 1969; Hayashi, 1982; Caballero, 1999).

Yet very few models highlight the fact that investment in capital goods depends mainly on corporate savings decisions, which are closely connected to the features of corporate governance and the forms of competition, and strategic competitive behaviours. In most advanced economies, in fact, retained earnings constitute the dominant source of finance (Mayer, 1988; Tirole, 2006).

Most models of investment decisions utilised in macroeconomic models, in fact, take free or perfect competition as explicit or implicit assumption. However, the oligopolistic structure of most real markets leads to corporate strategic behaviours that can produce very different results. Strategic decisions, connected with agency problems, can play a major role in producing financialisation and timing the rhythms of real investment.

In the following pages, after a brief survey of the role played by the interest rate, in all its different aspects, within investment theory, the paper deals with some contributions, both mainstream and heterodox, that analyse the effects of corporate governance and strategic behaviours on portfolio management and investment decisions in big corporations, seeking to determine how these effects might play a major role in producing growing liquidity holdings and financialisation. The main objective is to understand whether these models can explain the tendency to place growing shares of social surplus in speculative financial channels, thereby contributing to long-term real stagnation of at least one part of the world.

2. Investment decisions theories and the interest rate

2.1. The foundations of Neoclassical investment theory

Neoclassical economists are accustomed to bringing together under the heading of real investment decision criteria all the rational choices that involve a trade-off between the present and the future (Hirshleifer, 2008), with apparently no distinction between consumers and firms’ behaviours. In this way, investment is eventually reduced to the problem of optimizing consumption patterns over time. This obviously presupposes that all the economic agents can be reduced to consumers or their representatives, essentially because households are assumed to be the end owners of all the production factors and firms are viewed as mere agents of them.

Of course, in this schematised picture of the economy, the relation between investment, simply seen as the amount of reduction in current consumption, and the market interest rate has to be governed by the consumers’ structure of intertemporal preferences. Thus, assuming a universal psychological preference for the present on the part of consumers (households), investment will be a decreasing function of the market interest rate, which is the average measure of this preference.

In the simplest models of investment decisions of this kind, it is usually assumed that, at every point in time, a firm has only two alternatives in utilising its net revenues. It can disburse them to its owners as income or invest them to produce a greater amount of net revenues at some future date. Thus, by reducing owners’ current income at time $t$ and investing its retained earnings, the firm can increase future income of the owners
themselves. It is in this way that firms are no more than the simple agents for their owners’ intertemporal consumption choices (Branson, 1979).

2.2. Some alternative models

However, in the economic literature there are a number of models, both neoclassical and heterodox, in which the real investment decision-makers are firms that have no shareholders to satisfy (Romer, 2012). In this case, the connection with intertemporal utility equilibrium is not so immediate. In fact, investment decisions follow from entrepreneurs’ choices of techniques finalised to maximise their profit or, symmetrically, to minimise their production costs. The intertemporal utility equilibrium connected to them can still be demonstrated in the context of a general equilibrium scheme, thanks to the role played by market prices and interpretations of them in terms of utility, but the entrepreneurs’ choices between present and future cannot be immediately described in terms of utility, because the latter is not the direct objective to be maximised by entrepreneurs.

According to Irving Fisher’s neoclassical theory of capital, for example, firms should choose their production plans so as to maximize utility over time, and this, under certain conditions, would lead to maximization of the net worth of the enterprise as the objective for optimal capital accumulation (Jorgenson, 1963). However, this idea of firms maximising utility is the trivial result of the idea that market prices, at their equilibrium level, are measuring social marginal utilities. Thus, maximising the difference between revenues and costs – i.e. profit – equals maximising social utility. This final result, however, is no intentional outcome pursued by entrepreneurs, but only an impersonal effect achieved by the market’s invisible hand.

Nevertheless, in this theoretical perspective capital accumulation is the result of providing inputs – i.e. capital services – to the productive process, to maximise profit in accordance with given production functions. Thus, it is the outcome of changes in techniques made by firms in response to changes in external decision parameters.

In neoclassical models in which the investment decision is the direct consequence of the entrepreneurs’ choice of techniques, therefore, the interest rate is simply the price of utilising capital. Thus, its changes determine changes in the optimal technique chosen. If the interest rate goes down, then the choice moves towards more capital-intensive techniques, increasing the stock of capital desired and creating investment demand.

On this front, the main difference between neoclassical and neo-Ricardian models lies in attaining or not attaining well-behaved production functions that can guarantee optimal general equilibria. The Cambridge capital controversy proved that there was no regular relation between the use of jelly capital – i.e. financial capital – and labour productivity.

In neo-Ricardian models, changes in the interest rate have effects on the choice of techniques by means of changes in income distribution that produce changes in the long-period prices. The changes of techniques that produce capital accumulation are still the consequence of minimising production costs, yet the connection between the interest rate and the cost of utilising capital is more indirect (Pasinetti, 1966).
In both these kinds of models, however, real investment, as accumulation of capital, is viewed as a passive behaviour, because it is only the result of firms adapting techniques to exogenous changes in market or social parameters.

Thus, real investment as a result of changes in the choice of techniques shows capital accumulation behaviour as a mere passive effect, led both by changes in technology and consumption preferences, as well as the relative availability of production factors in neoclassical models, or by changes in distributive variables and exogenous aggregate demand in neo-Ricardian, Keynesian and post-Keynesian models (Crotty, 1992; Bonifati, 2016). However, this theoretical result is the consequence of the assumption of perfect or free competition, under which firms are aware they cannot modify their decision-making parameters.

2.3. Strategic behaviours and Schumpeter’s hypotheses

Under oligopolistic competition hypotheses, however, things could be very different. In this case, firms could be following strategic behaviours aiming to gain key positions in the market for successive competition battles, such as a growing share of the total supply in specific production sectors. From this point of view, for example, firms could forgo present normal profit for greater expected future extra-profit, based on greater monopoly power. These kinds of strategic behaviour could, therefore, increase aggregate real investment as compared with equilibrium saving decisions, producing disequilibria in the financial markets and pressures on interest rates, as was probably the case in Europe during the 1960s (Lamfalussy, 1968).

A close connection between real investment and strategic behaviours clearly emerges from Schumpeter’s analysis. According to his approach, in fact, capital accumulation is the consequence of “innovation” - i.e. the result of active strategies of reducing own production costs as compared with those of their competitors on the part of “entrepreneurs”, which are creative managers and capitalists or genial inventors well financed by forward-looking banks and other financial intermediaries. Thus, innovation appears as a series of creative actions by “enterprises” – i.e. innovative firms – intrinsically embodied in new investment goods, which push the economy out of its stationary equilibria, inducing adjustments in the choice of techniques, and then more investment, also in the non-innovative firms (Schumpeter, 1939).

From this point of view, capital accumulation is still connected with cost-minimising behaviours, but in a context of active and strategic competition for the conquest of dominant or monopolistic positions in the market, in order to make the highest possible extra-profit. There is no role played by the interest rate, apart from the risk premium required by financial operators, which could in some case discourage the entrepreneurs from seeking higher extra-profits.

2.4. Interest rates and financial investment

In neoclassical economics, however, the interest rate, at its equilibrium level, is also a measure of the marginal productivity of capital - i.e. the marginal rate of profit. Thus,
Investment quantity depends on capital profitability too, obviously compared with the available quantity of savings supplied, which in turn depends on the intertemporal consumer preferences.

In recent years, after the financial crisis of 2007-2008, the idea is returning that the central banks have to influence market interest rates to drive them toward levels consistent with their best estimation of the equilibrium real interest rate – i.e. the Wicksellian interest rate (Bernanke, 2015). Thus, according to mainstream approach, the objective conditions of the economic systems, and in particular return on capital invested, are again what ultimately determine the real rate of return for savers and financial investors.

This draws attention to the role of the interest rates as rate of return on financial assets. From this point of view, the term structure of interest rates is very important in determining portfolio choices, and then the alternative between financial and real investments.

In Keynes’s theory, investment is the driving force of income levels and their fluctuations (Minsky, 1975), and this, in turn, depends on the propensity to hoard, and therefore, on the monetary policy and expectations concerning yield of capital assets (Keynes, 1937). Thus, Keynes’s theory of investment connects the fluctuations of real investment to variables which are determined in the financial markets and primarily to the rate of interest (Minsky, 1975). The monetary theory of the interest rate proposed by Keynes, in fact, underlined its meaning as required rate of return on financial investment. From this point of view, if speculators are not viewed as intrinsically different from other types of investors, the interest rate may be in competition with the expected rate of return on real investment - i.e. the rate of profit - within portfolio choices. New savings can be invested in a financial or real way depending on comparison between the interest rate on financial capital and the rate of profit with the risk premium deducted.

Thus, Keynes argued that even though aggregate saving depends essentially upon aggregate income level, the rate of interest plays a secondary role by influencing how economic agents allocate their savings among different potential shares of their portfolios.

2.5. Marx’s conception of investment

Marx’s conception of investment, as capital accumulation, is, then, quite another issue, but very relevant to our task of analysis. According to Marx, in fact, capital accumulation is the mere result of the self-valorisation process of capital. If capital value is, by nature, in search of additional value, then the surplus value, which is of the same nature as the original capital value, will in turn be searching for its additional value. Thus, capital, by its very nature, organises a continuum process of self-valorisation that increases its value, until an overproduction crisis temporarily arrests it.

This conception, which might sound somewhat metaphysical to those who conceive of real investment only as a way to adapt production techniques to new market conditions, in fact fully complies with the ‘pursuit of shareholder value’ principle, put in
place by the managers of big corporations, who certainly cannot be suspected of being Marxists.

In Marx’s works, moreover, there is no reference to the fact that the rate of profit can be a subjective incentive for accumulation of capital or play a role in changing aggregate investment decisions. According to him, the average rate of profit plays a role only in capitalist competition, stimulating movements of money capital – i.e. financial capital – from one productive branch to another and determining a redistribution of total surplus value proportionally to the money capital invested in capital goods and anticipated wages. Thus, different rates of profit in different productive branches can reduce real investment in those with the lowest rate, but increase it in those with the highest rate. Obviously, analogous movements of money capital can also occur between financial branches or between real branches and financial branches. And Marx also thought the rising mass of profits that exceeds the possibilities for new industrial investment in periods of prosperity first accumulates as a huge mass of credit and then ends up by taking speculative paths, because the production process usually appears only as “a necessary evil for the purpose of money-making”, and at the first opportunity, “fits of giddiness” are unleashed in which capitalists “try to accomplish the money-making without the mediation of the production process” (Marx, [1885]1992, p. 137).

In conclusion, even though the interest rate, in itself, can play a minor role in determining real investment, if corporate managers act as financial investors, then the term structure of interest rates could play a major role in determining investment in capital goods as a share of companies’ portfolios. At this point, the way managers make their portfolio choices becomes crucial. Yet above all, what happens to the relation between investment decisions and the term structure of interest rates if corporations are not a veil but decision-makers guided by objectives other than utility maximization? This issue, of course, is closely connected to corporate governance problems.

3. Corporate governance

Since the appearance of the book by Berle and Means (1932), the separation of ownership and control and the substantial managerial discretionary powers have constituted a path-breaking issue in the debate on corporate decision-making (Tirole, 2006, p. 15).

Severe agency problems can impair corporate performance in both public companies, such as those operating in Anglo-Saxon countries, and companies with a controlling shareholder, such as those prevailing in European countries. Insiders can operate on the basis of criteria other than those of the fund providers, not necessarily against their long-run interests, but through strategic considerations that are not easy for the mass of outsiders to understand.

If firms are viewed as mere instruments operating in the interest of the equity owners, the agency problem needs the organisation structure of firms to be shaped to provide proper incentives for managers to act in the shareholders’ interest. From this point of view, the internal control by means of the board of directors usually appears to be hardly effective at all. The main external mechanism for corporate governance in
Anglo-Saxon countries, in fact, consists in hostile takeovers, but in other countries this mechanism seems rare or completely non-existent. In bank-oriented financial systems, the same role is mainly performed by monitoring banks and other financial institutions and close relationships between firms and banks (Allen, Gale, 2000).

However, corporate governance, as is well known, is usually defined as “ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment.” (Shleifer, Vishny, 1997; Becht et al., 2002). The main problem, therefore, seems to be how corporations’ insiders can attract external financial funds, committing themselves to paying back funds, with an adequate rate of return, to external investors.

In the usual description of the financing of firms, accountants and economists distinguish between debt and equity. However, on a closer look, debt and equity are only the two extremes of a long claim series on corporate income held by a number of different claimholders (Tirole, 2006). Common stockholders, of course, have voting rights in shareholders’ meeting, by means of which they can exercise direct control over the board of directors. Most claimholders, however, can vote with their feet in financial markets, if the latter are sufficiently liquid.

However, who holds the claims definitely matters. The corporate governance way of functioning depends on whether equity is held by “insiders” (managers or entrepreneurs) or by “outsiders”, on the shareholding concentration and the nature and dimension of the claimholders.

An agency conflict can arise whenever managers have different objectives from their shareholders. Of course, there are many ways in which managers may not act in the shareholders’ best interest, but they are all gathered by mainstream economists under the label “moral hazard” (Tirole, 2006, p. 16). One of these ways, in particular, is defined by Tirole “extravagant investments”, which could sometimes be only strategic moves over a horizon longer than that of financial investors, who are often victims of the short-sighted view of the discount rate.

In the first three post-war decades, the role of shareholders in corporations was severely limited by heavily restrictive financial regulation and capital flows control, which were the political reactions to the financial and real crisis of the 1930s.

In the 1950s and 1960s, according to Baran and Sweezy (1966), giant corporations usually aimed at financial independence through retained earnings. They were able to borrow from financial institutions and markets, but were not normally forced to act so and could avoid subjection to control by financial corporations and outside shareholders. In this kind of corporations, managers were a self-perpetuating group that identified itself with the corporation and its fate. The board of directors and the chief executive officers were “organization men” and the control rested securely in their hands. Their major objectives were the corporation market share and its strategic positions in the market.

However, this situation has been changing since the late 1970s, through the progressive erosion of financial regulation by means of the invention of new financial instruments, such as junk bonds and other high-risk and high-return securities. Moreover, up to 1982 the Securities and Exchange Commission (SEC) could counteract massive stock repurchases as illegal attempts to manipulate stock prices by the companies. Since the end of 1982, instead, during the deregulation onset of the
neoliberal phase, the SEC has partially liberalised stock repurchases, provided that they be less than 25% of the average daily trading volume over the previous four weeks and the buybacks be carried out at neither the beginning nor the end of the trading day (Lazonick, 2013).

By means of this financial deregulation, the financial markets have progressively exerted increasing pressure on non-financial corporations (NFCs), by means of hostile takeovers first, and then with the “shareholder revolution”, characterised by a growing presence of institutional investors within their shareholding (Lowenstein, 2004; Orhangazi, 2008). French regulationists have been emphasising corporate governance since the 1970s, because the pursuit of “shareholder value” is closely associated with the short-termism of non-financial corporations (Boyer, 2000; Grahl Teague, 2000; Aglietta, 2000; Aglietta and Breton, 2001), and Lazonick and O’Sullivan (2000) have perceptively shown the connections between shareholder value and company downsizing throughout the neoliberal phase of capitalist development (Lapavitsas, 2011).

According to Stockhammer, the “shareholder revolution” is one of the main features of the present neoliberal era, which has produced radical changes in corporate behaviour in the name of creating “shareholder value.” According to him, this revolution has been the consequence of the financial liberalization and the emergence of very liquid share markets in the 1980s and 1990s, together with the successive rise in shareholders’ capability to influence public company managers by means of the creation of “a market for corporate control”. The managements of large corporations, in fact, would have committed themselves to increasingly producing shareholder value because of the expanded possibilities for financial investors to use the capital market to estimate and compare performance of their corporations and to discipline them with the threat of hostile takeovers. In this new context, the managers of large corporations could easily be replaced by shareholders if corporate performance proved inadequate in creating value for them (Stockhammer, 2006).

Moreover, twenty years ago an important tendency was identified in the emergence of mutual and pension funds which held growing fractions of equity, increasing their ownership shares at the expense of cross-shareholdings between non-financial firms. These institutional investors allocated capital among industries and firms in a decidedly market-based way, imposing profitability norms on enterprises and looking to short-term profit. They exerted their power over the management with exit strategies, creating difficulties for the firm to obtain new financing. Their arrival unleashed competition for global saving among companies. However, investment funds were set up by the banks, especially in Europe (Levine, 2003).

Thus, the threat of growing control by large financial intermediaries in public companies could be an incentive for managers to change their investment behaviours, increasingly orienting them towards short-term profit investment and discouraging “extravagant” or long-term strategic investments. This change is also supported by an incentives system for managers that closely connects their wages to the company stock prices, encouraging financial operations like share repurchasing by means of retained earnings, which would thus be subtracted from investment in new capital-goods and technologies.
However, this tendency to produce an increasing shareholder value could not only be the result of new forms of corporate governance and new financial intermediaries, but rather the traditional way to maximise the equity capital self-valorisation in a different competition environment and given new financial investment opportunities. This puts the emphasis on other transformations of the capitalist system in its neoliberal phase, which have been in part gathered under the label of financialisation.

4. Financialisation

Today the term financialization is usually used to refer to three different, even though interconnected, phenomena. The first is the reduction of reliance on bank loans by large non-financial corporations and their growing autonomous ability to raise funds in financial markets. The second is the expansion of banks’ mediating activities in financial markets and their tendency to lend mainly to households. The third is the increasing involvement of households in the financial markets, as both debtors and asset holders (Orhangazi, 2008; Lapavitsas, 2011).

Thus, at the macroeconomic level, financialisation in practice simply becomes synonymous with the expanding financial sector within the economic system.

However, the concept can have a deeper and more interesting meaning at the firm level, where it can highlight the changes in the behaviours of the managers of non-financial corporations and their new relations with the financial markets.

An important part of the literature on the relation between financialization and investment draws on Keynesian and Minskian approaches, which emphasize the importance of financial factors in corporate investment (Eichner and Kregel, 1975; Minsky, 1986; Skott, 1989; Crotty, 1990, 1992; Lavoie, 2014; Davis, 2017). In the last three decades, however, a new kind of phenomenon has powerfully been emerging. Mainly in the US, but also in continental Europe, non-financial corporations have been increasingly investing in financial assets and creating own financial subsidiaries, deriving increasing shares of their income from this kind of pure financial activities (Stockhammer, 2004; Orhangazi, 2008). In the same period, NFCs have increased transfers of earnings to the financial markets in the forms of interest payments, dividend payments and, mainly, stock buybacks. Thus, according to some analysts, these transformations, in close synergy with the previously examined evolution in corporate governance, have produced radical changes in the objectives of top managements, favouring an increasing propensity to substitute real investment with short-term financial investment in the process of corporate investment decision-making.

Moreover, according to Sawyer (2017), financialisation has changed the relations between the financial sector and the real sector because the passage of ownership of non-financial corporations into the hands of financial corporations has emphasised the ‘pursuit of shareholder value’. This could again connect the effects of financialisation to those previously examined with regard to corporate governance changes. In pursuit of higher corporate performance, defined as meeting financial markets’ expectations for quarterly earnings per share, American companies have conducted great stock repurchases to increase their own corporations’ stock prices (Lazonick, 2013). In this
way, trillions of dollars have been subtracted from innovation and job creation over more than three decades.

Thus, a financialized mode of corporate resource allocation could have been produced through the principle of maximizing shareholder value, and corporate executives have been incentivised in this direction by their stock-based compensation.

Financial control, however, has traditionally been viewed also as a particular organization controlling model by top managers (Fligstein, 1990). Thus, the ‘pursuit of shareholder value’ could simply be the effect of traditional maximising self-valorisation of the capital of owners with a controlling shareholding, who utilise mass-shareholders and their financial intermediaries as less-secured claimholders, with a minor role played by the “shareholder revolution”.

As pointed out above, since the late 1980s non-financial corporations, while reducing their accumulation of capital goods, have progressively increased their financial investment (Stockhammer, 2004). The decreasing fixed capital formation rate in many countries, both developed and developing, has probably been the effect of growing uncertainty, risk and volatility on the real investment performance (Demir, 2009). Thus, the relation between fixed investment, uncertainty, increasing integration of international capital markets, the widening gap between real and financial sector transactions and corporate portfolio choice seems to be a very important factor. Successively to financial liberalization, in fact, NFCs have been facing portfolio choice problems in their investment decisions between fixed and financial assets and increasing availability of alternative financial investments can channel NFCs’ retained earnings to short-term financial investments instead of long-term fixed capital formation, and thus contribute to deindustrialisation.

If companies are viewed as common financial investors, Tobin’s portfolio choice theory points out the substitutability of real and financial assets also in their portfolios, depending on the respective rates of returns. Increasing risk and uncertainty, combined with capital market imperfections, higher real interest rates and increasing rates of return in the financial markets, may encourage short-term financial investments over long-term real investments. In fact, according to Tornell (1990), an uncertain environment can usually encourage NFCs to invest in more liquid assets, which at the same time offer comparable or higher rates of return, at the expense of their real fixed assets.

In the first decade of the 2000s a growing part of the literature on financialisation focused on increasing rates of return on financial capital over those on fixed capital and at the same time increasing acquisition of short-term financial assets by NFCs in high-income OECD countries, providing empirical evidence of a structural change in their portfolio decisions (Stockhammer, 2004; Crotty, 2005; Dumenil, Levy, 2005; Epstein, Jayadev, 2005). Other studies suggest that also NFCs in developing countries take into account alternative financial investment opportunities when making their decisions on physical investment (Demir, 2009). All these empirical works, moreover, have demonstrated that the increasing financial activity of NFCs has had a negative effect on their real investment (Stockhammer 2004, Orhangazi 2008, Demir 2009).

Thus, financialisation constitutes a radical change in corporate management behaviour that can produce major changes in investment demand for single firms. However, even though financial investment can be alternative to physical investment at
the level of the single corporation, at the macroeconomic level the phenomenon shows a clear fallacy of composition. Indeed, financial investment only transfers liquidity from one agent to another one. Thus, it could transfer financial resources from firms with bad investment opportunities to others with better profitability prospects. From this point of view, it should have no macroeconomic effect, apart from increasing efficiency (Tobin, 1997).

There are only two possible macroeconomic effects, global and local. The former is substantially reducible to hoarding or a speculative demand for money. The latter, instead, is closely connected to capital transfers between different countries. In both cases, the macroeconomic problem does not emerge from financialization in itself, but from its relations with other features of economic systems. From a Marxist point of view, it is real accumulation that determines the parameters on which finance runs, even though the latter can cause counter effects on the former (Itoh, Lapavitsas, 1999).

5. Liquidity holding

Hoarding money and very liquid assets by NFCs, as in Marx's theory of crisis, could therefore be once again the first mover of decreasing aggregate investment that actually lies behind the multiform appearances of financialisation. And this phenomenon, of course, is closely connected to the role of money in business fluctuations.

The cash balance policy of enterprises was already attracting attention in the late 1920s, immediately before the Wall Street crash of 1929. At that time corporations utilised part of their previous accumulated cash balances to buy securities in the stock exchange market in order to profit from the high call loan rate. So they were accused of contributing to the boom on the stock exchange, but also of feeding the financial markets at the expense of the other markets (Scarano, 2016).

In the 1930s, corporate cash holdings were again an object of heated discussion because, according to some economists, corporations held "idle" cash (cash balances in excess of current operation needs), contributing to the stagnation of the economic system.

According to a seminal study by Lutz (1945), in the years of the Great Depression the ratio of cash plus marketable securities to payments rose sharply. This ratio diminished from 1933 to 1937, and then rose again in 1938, because of a new business contraction. According to Lutz, the ratio of cash plus marketable securities to payments showed a rise in periods of business contraction and a fall in periods of expansion, and the movement of these free liquid funds showed an inverse correlation with the profit rate of the large corporations.

Thus, according to him, in the 1930s the large manufacturing corporations held "free" liquid funds because they were hoarding money. The major reason for this was that the big corporations were largely independent of bank credit, so that their bank debts did not absorb the "surplus" cash originated through liquidation of inventories and receivables during the depression. This behaviour suggested that in a system in which companies are not largely indebted to the banks, business fluctuations may be reflected in a change in the velocity of circulation of firms’ deposits.
According to Lutz, during the period of depression in the thirties, medium-sized and small corporations had a small increase in their cash holdings, because great losses and the retirement of bank debt absorbed the liquid funds that would otherwise have been accumulated. Thus in the thirties, “hoarding” was mainly a matter of large manufacturing corporations.

The corporations’ cash balances were fed by partial liquidation of inventories and receivables and by the postponement of replacements for fixed equipment. Most of the additional cash was paid out mainly through distribution of dividends.

Coming back to the present, since 2002 the gross saving in the OECD corporations has been progressively exceeding their fixed investment (OECD, 2007; André et al., 2007; Scarano, 2015). Only one third of this increase in undistributed profits was generated by the non-financial sector, but this sector contributed to the increase in corporate net lending more than the financial sector.

The large-scale expansion of corporate net lending in the non-financial sector has been interpreted as partly due to the cyclical downturn since 2001 (OECD, 2007). Some econometric works, in fact, suggest a significant influence of the business cycle on the corporate net lending between 2001 and 2005 (André et al, 2007).

However, the rise in net lending is the result of two different tendencies: falling corporate investment and increasing corporate saving share. The weakness in corporate investment, compared with GDP, can usually be largely the consequence of the business cycle, but other causes, more structural in nature and thus longer-lasting, have been detected in the progressive decline of the relative price of capital goods, in lower depreciation rates, in lower growth trends and increasing net foreign investment abroad.

If growing corporate cash balances might seem relatively trivial after the financial crisis of 2007-2009, its beginning seven years before the crisis was a warning signal that, in 2012, led the ‘Economist’ to write about “hoard instinct” and “dead money” (The Economist, 2012).

Corporations usually utilise their gross savings for depreciation, new investment, acquisitions, paying off debts and share repurchases. The change in the cash balance should normally be just the residual after spending. However, they can also hold liquid balances for precautionary, speculative and transactional reasons. The precautionary motive obviously prevails when they fear unforeseen fluctuations.

After the financial crisis, companies were certainly keen to accumulate more substantial cash balances to face up to the credit crunch. But most of companies were waiting to invest and make acquisitions because of uncertainty following the crisis. The beginning of the phenomenon, as from the early 2000s, suggests that uncertainty in the non-financial sectors really came to dominate the global economic scene as from the burst of the 90s bubble.

6. Conclusions

Thus, ultimately, even though the interest rate can play a minor role in explaining real investment, in a world in which corporation managers behave as financial investors, the term structure of interest rates can play a major role at the firm level in determining investment in capital goods as a share of companies’ portfolios. This structure will
obviously depend on the available financial alternatives and the risk premiums that prevail in their markets.

However, the “risk premiums” in imperfect markets are not necessarily the statistic measure of the riskiness of loans and contributions of capital, as the mainstream theory assumes, but can rather be the result of the power relations between financial capital and industrial capital, as classical economists and Marx himself thought. Thus, the average rate of return on financial assets can be the measure of the comparative profitability in utilising capital in a financial or productive way.

From this point of view, the major variable in explaining investment decisions is not the interest rate on money markets, strictly controlled by central banks, but rather the average “risk premium” as a measure of the average profitability in financed real activities. And this measure is closely correlated with Tobin’s $q$.

Of course, at the macroeconomic level, in closed economies, the average profitability can only have effects in capital movements from one sector to another, in direct or financial form, but cannot explain the absolute level of real investment. In open economies, however, the differences in average profitability between different countries can matter, reducing capital sources for real investment in one country by means of capital transfers, in direct or financial forms, towards other countries.

Moreover, in portfolio choices by corporations, beside the rates of return, the liquidity degree of the assets can also be a very important determinant, in close connection with business fluctuations. Thus, portfolio choices by corporations also mainly depend on the uncertainty degree of their economic environment, which can induce hoarding phenomena that are, ultimately, the real prime mover of decreasing aggregate investment.

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