

## **Financing Investment under Fundamental Uncertainty and Instability: A Heterodox Microeconomic View**

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This study inquires into investment and finance decisions as they are related to other decisions within the going business enterprise embedded in the monetary social provisioning process. When it comes to investment and finance, business enterprises' strategic decisions often escape notice by heterodox macroeconomists. In place of strategic decisions, financing and investment are mainly looked at through the operation of the financial market in which the supply of and demand for investment funds are coordinated by the prices of funds. Consequently, heterodox macroeconomic theory of investment and finance deals mainly with external financing. In this article I argue that the strategically generated internal means of finance is the main source of fixed investment, especially when the economy is in recession or economic instability is increasing. The positive empirical relationship between external finance and fixed investment is hardly discerned. Even the financialization of non-financial corporations in recent decades has not reduced the importance of internal financing over external financing.

### **INTRODUCTION**

Economists have long wrestled with uncertainty in constructing a sensible economic theory. Taking uncertainty into account makes a theory indeterminate and complicated. For models to begin and end up with an equilibrium state, uncertainty must be converted into something readily calculable (that is, risk in a probabilistic sense), or be abandoned by assuming that uncertainty does not exist. Efficient market theory takes the latter approach by assuming that rational individuals have perfect information. New classical economists and New Keynesians, among others, have relaxed the perfect information assumption to explain abnormalities that routinely happen in "efficient" markets. In their models, rational agents with bounded rationality make errors, whereas the model is assumed to be consistent

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and correct regardless of agents' errors. With this relaxed assumption as to uncertainty, the core propositions of neoclassical economics, such as rational individuals, equilibrium, market clearing, and market stability remain intact or even reinforced. This is a convenient rationalization in the sense that complex reality is made to fit into the theory, rather than the reverse (Crotty, 1996; Henry, 2009: 33; Skidelsky, 2009: 56).

If actual decision-making in the real world is of analytical concern, risk and uncertainty should not be conflated because they are not only conceptually distinct but also play different roles in making decisions. Risk is, on the one hand, an agent's subjective perception of events with limited knowledge. A probability may be assigned to a particular event, but it varies at different times and in different situations. Uncertainty, on the other hand, refers to the absence of knowledge, which comes into effect in our everyday life regardless of the amount of information held by acting agents. Agents' perceptions of risk thus arise from uncertainty. In this 'fundamental' sense, uncertainty is incorporated into heterodox economic theory with the following notable properties: (1) it has nothing to do with measurable probability (Keynes, 1936: 148, fn. 1; Shackle, 1955: 4; Davidson, 1972: ch. 2); (2) there is a degree of uncertainty that is institutionally and historically contingent (Crotty, 1996: 342-343); (3) it is linked to subjective risk through an agent's expectation that drives her decision and action; and (4) due to different types of agents with different levels of concerns, both micro- and macro-uncertainty are to be considered in an integrative manner (Pressman, 2011: 513). Such a concept of uncertainty has led Post Keynesians and other heterodox economists to develop theories that are radically different from mainstream theory. In brief, common to many heterodox economics traditions all economic activities are situated in a monetary production economy where isolated optimizing behaviors are not possible and, thereby, the equilibrium analysis based upon the principle of margin is irrelevant. In place of rational behavior, strategic behavior, facilitated or constrained by socio-economic power in the context of hierarchical structure of society, becomes necessary. It follows that the causes and effects of strategic decisions by socially embedded agents are understood in a socio-economic context where institutions, rules, conventions, cultural values, ideologies, social relationships, and social classes are entangled. Such a comprehensive and realistic approach is succinctly encapsulated by a heterodox view of economics—that is, economics is "the science of social provisioning" (Gruchy, 1987: 21)

and, more specifically, it is “an empirically grounded theoretical explanation of the historical process of social provisioning within the context of a capitalist economy” (Lee, 2009: 8; see also Jo, 2011b; Lee, 2011b).

The social provisioning process as an emergent, historical process is radically uncertain in two ways. First, social agents maintain or change existing structures and hence the historical path of the provisioning process is open. Second, all economic activities and outcomes are denominated in money or embedded in the credit-debt relation that is in its nature uncertain and unstable in value terms. Therefore, the social provisioning process is open-ended and fundamentally uncertain without any pre-determined end or equilibrium, although agents in society make decisions with a projected end in their mind. Strategic decisions in this context do not imply that agents are short-sighted and naive rule-takers. The world translated into the social provisioning process is “constantly in motion. Constants become variables, causes become effects, and systems develop, destroying the conditions that gave rise to them” (Levins and Lewontin, 1985: 279). If the world is perceived in this way, the micro-macro “dichotomy,” or the argument that macroeconomics or microeconomics is an autonomous discipline (see, for example, King, 2012: 231-235), becomes limited and misleading. To understand the role of the business enterprise in the capitalist system, in particular, it is necessary to understand its strategic actions (such as pricing, investment, and financing) conditioned by the structure of production and of industry as well as its outcomes (such as wage and profit, employment, output, and income distribution). Thus, the inquiry into the interactions between different levels (that is, the whole system qua macro and sub-systems qua micro) via social agents, rather than the artificial separation between micro and macro, would offer more comprehensive and realistic historical narratives—this is the heterodox microeconomic approach on which the present study is based (Lee, 2011b; 2012b; 2013; Jo, 2011b; 2015).

From this vantage point, this study inquires into investment and finance decisions as they are related to other decisions within the going enterprise embedded in the monetary social provisioning process. When it comes to investment and finance, business enterprises’ “strategic” decisions often escape notice by heterodox macroeconomists.<sup>1</sup> In place of strategic decisions, financing and investment are mainly looked at through the operation of the financial market in which the supply of and demand for investment funds are

coordinated by the prices of funds. Consequently, a heterodox macroeconomic theory of investment and finance deals mainly with external financing. While such an approach has offered important implications with regard to financial instability and business cycles, it is based upon the problematic supply-demand framework or neoclassical microfoundations. Keynes (1936) and many Post Keynesian economists are not completely free of such a criticism (see Eichner, 1985: 4-9).

The questions to be addressed in this article are how strategic investment and financing decisions under uncertainty and instability can be linked to the heterodox macroeconomic theory of investment; and what novel implications we can draw from such a micro-macro integrated analysis. The latter implies that a heterodox theory of investment and finance needs heterodox micro foundations so as to offer better explanations of investment and financing decisions situated in the uncertain and unstable social provisioning process.<sup>2</sup>

Toward this end, the next section delineates the business enterprise and its activities in relation to other agents in the monetary social provisioning process. In doing so it is discussed that investment and financing decisions are inextricably linked to other decisions that are necessary for the business enterprise to remain ongoing. The following section explores financing and investment at both micro and macro levels. The main argument made in this section with the support of empirical data is that internal financing as part of a set of strategic enterprise decisions is more important than external financing, insofar as the business enterprise as a going concern desires to survive and grow over time. Its importance is reinforced as instability increases. The final section concludes the paper.

### **THE BUSINESS ENTERPRISE IN THE MONETARY SOCIAL PROVISIONING PROCESS**

The business enterprise sets the pace of the social provisioning process by making both routine and momentous decisions that are technical, historical, and social in their character.<sup>3</sup> Business decisions are technical to the extent that the employment of labor power and purchasing of material inputs are technically conditioned (that is, production techniques are represented by labor and material input coefficients derived from the input-output matrix of the economy). It goes without saying that techniques available at a point in time are socially and historically generated.

A historical decision means that one decision follows another sequentially, rather than multiple decisions being made simultaneously. Given a specific goal of the enterprise (say, expanding production capacity), investment, finance, sales, price, and input decisions follow sequentially. The investment decision, in particular, links the present production period to the future period (such a decision-making mechanism is explicated later).

All business decisions are social, since they involve other social agents at every stage in business. Social characteristics of the business enterprise are well epitomized by the following two examples that have drawn much attention from professional managers and economists in recent years. Firstly, the value of corporate “goodwill” (or intangible assets such as trade-marks, copyrights and patents, brand names, reputation) that is measured by the difference between the stock market value and the real asset value of a corporation has been increasing markedly. In the US, it was estimated that intangible assets constituted 43.2% of the total S&P 500 book value in 2005 (Serfati, 2008: 46). Another example is “corporate social responsibility.” It has been initiated and popularized by private corporations in order to make greater profits or growth in the longer term by creating an image that private business enterprises serve the interest of society (Carroll, 2009; see Jo, 2011a for a critique of the conventional view of corporate social responsibility). Above examples indicate that the business enterprise cannot be isolated from others, insofar as it desires to remain as a going concern.

How then are enterprise decisions and actions connected to other agents or sectors in the economy? Figure 1 illustrates various linkages between the business sector and other sectors in the economy for a given production period through the flows of money and goods/services.<sup>4</sup> From this some theoretical implications associated with financialization can be brought up.

First, the household sector is dependent upon the industrial sector through the employment-income relationship. Employment decisions are made by the business enterprise and thereby wage incomes are dependent mainly upon the enterprise decision to produce outputs (that is,  $C'$ , the social product). In the neoliberal era characterized by financialization, deregulation, and the scaled-back welfare system, the household sector as well as the business sector becomes more debt-dependent (not to mention, income inequality between the rentier class and the working class households has been increasing). This trend implies that as the capitalist economy becomes more unstable, the welfare of the working class households becomes more vulnerable

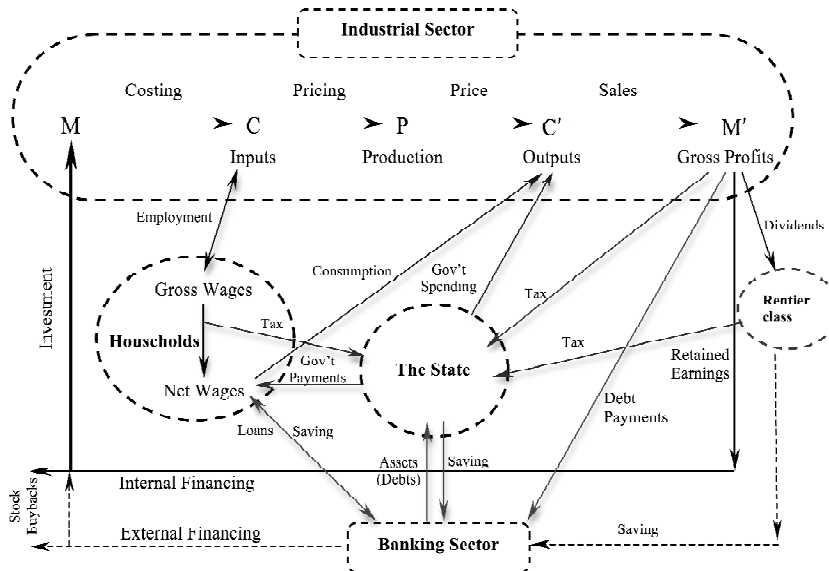


Figure 1: Monetary Social Provisioning Process

(Kalecki, 1971: 105-109; Lazonick and O’Sullivan, 2000: 32; Jo, 2013: 449-452). Thus the instability and vulnerability are the outcome of activities undertaken by the business enterprise in the course of production, rather than they emerge as a result of financing decisions made in the financial markets.

Second, the capitalist state plays three interrelated roles in the process of social provisioning. The state is a giant consumer who is capable of purchasing a significant portion of the social surplus nearly without budget constraint. The state is the tax authority who redistributes wages and profits. The state is also the welfare purveyor. These three functions help stabilize the social provisioning process and protect the existing social order. However, such conventional roles of the state have changed over the past thirty years or so. The welfare state in the US, in particular, has been replaced by corporate welfare (or “workfare”) since the dominance of neoliberalism. It was a part of neoliberal creeds that financialization, privatization, and deregulation would improve economic growth as well as public welfare through the efficient market system. Neoliberal policy, however, has led to the disappearance of secure jobs and the massive household debts. In the absence of the welfare state, the welfare of households can only be sustained by employment, which is not guaranteed under neoliberal

capitalism. Consequently, the capitalist economy has become more unstable and income distribution has become more unequal (Wray, 2009; Soederberg, 2010: 42-44; Jo, 2013: 449-452).

Third, the provisioning process is managed and organized by the dominant agent or class of the capitalist society. In particular, it is the enterprise and state decisions to produce the social surplus (or Sraffian “non-basic goods”)—i.e., consumption goods, fixed investment goods, and government goods and services—that drive the production of the total social product since the production of surplus goods requires the production of intermediate capital goods (or Sraffian “basic goods”). The level of employment is determined through the output-employment multiplier. Furthermore, the effective demand for fixed investment goods generates the flow of the production of intermediate inputs, the flow of the production of fixed investment goods, and the flow of funds to finance the demand for fixed investment goods. Therefore total investment at the aggregate level generates gross profits via the production and sales of the social surplus. Gross profits are then divided into tax payments, dividend payouts, debt payments, retained earnings, and stock buybacks.<sup>5</sup> At the enterprise level the distribution of profits is determined based on the enterprise’s strategic decisions to grow and survive (Wood, 1975: ch. 2). Enterprise investment and production decisions also influence household savings through wage incomes. In a simple monetary production economy illustrated above, increasing household saving leads to fewer consumption goods being produced and fewer workers being employed, if the state (and/or the foreign sector) does not fill the effective demand gap. To be a viable economy, there must at least be a government willing to run deficits as long as effective demand is under the full employment level (Tcherneva, 2008). This further implies that financial assets (e.g., government bonds held by households and private business enterprises) and the banking sector are inseparable parts of the economy. Furthermore, the amount of available investment funds is not necessarily constrained by the amount of gross savings because the banking sector would create funds/credits on enterprises’ and government’s demands (see Lee, 2011a; 2012b; Lee and Jo, 2011, for more details about the “heterodox social surplus approach” on which the present discussion is based).

Fourth, the enterprise decision to produce surplus goods is followed by the price decision. In contrast to the neoclassical real exchange economy in which quantity and price are simultaneously determined in the market, in the monetary production economy price

and quantity are determined by separate mechanisms that are established technically, historically, and socially. Business enterprises determine product prices at the normal flow rate of output before the actual market transactions take place, while the level of output is determined by the effective demand for surplus goods and services. Consequently, prices are stable for a significant length of production or transaction time. The variations in quantity demand has little to do with the changes in prices (see Eichner, 1976: chs. 2-3; Lavoie, 1992: 141-144; Lee, 1998: 223-231; Downward, 1999: 7-8; Jo, 2007: 171-177). Empirical studies have shown that business enterprises use various pricing methods along with collective pricing practices through market organizations (such as cartels and trade associations) and government regulations for the sake of stabilizing prices (Means, 1939; Lee, 1998: 211; Fabiani *et al.*, 2007; Melmies, 2010). This is because price stabilization is necessary, if not sufficient, for the continuous growth and expansion of the business enterprise. Stable or 'administered' prices, therefore, enable the business enterprise to finance the desired level of investment through retained earnings (Eichner, 1976: 196-200; Harcourt and Kenyon, 1976). A strategic pricing mechanism is not complete without cost accounting practices, which are deployed in order to keep track of recurring cost items and one-time expenses, to categorize direct and overhead inputs, to determine the unit cost of output and depreciation, and to define profits and business incomes in the accounting sense (Lee and Jo, 2010: 4-5). These findings imply that price does not equilibrate supply and demand. Nor does price allocate resources efficiently and, hence, clear the market. Instead, prices are set to gain access to the social provisioning process and to reproduce the business enterprise (Lee and Jo, 2011: 865). This is a salient contribution made by heterodox microeconomists, as an alternative to the supply-demand framework.

Last, there is no doubt that the banking or financial sector is indispensable to the social provisioning process. Although the survival and growth of the banking sector is still dependent upon other sectors in the economy, financialization has changed the structure and mode of the provisioning process. The pursuit of ever-increasing monetary gains over the production of goods and services, although this is not totally new, is the primary goal of both financial and non-financial enterprises (Veblen 1904; Minsky 1996; Jo and Henry, 2015). Consequently, the survival and growth of the business enterprise is endangered as evidenced by the increasingly shorter life-span of corporations (De Geus, 1997; BBC News, 2012). This is the "neoliberal



paradox” in the sense that financialization is inimical to the stability and viability of the capitalist provisioning process (Crotty, 2003: 272). However, this is not to say that business enterprises do not pursue survival and growth any more. Data shows that while money-making business activities—measured by the acquisition of financial assets, interest payments, dividend payouts, stock buy backs—have been dominant over good-making activities since 1980s, productive investment by non-financial corporations has not actually declined significantly (see Kliman and Williams, 2015). This empirical evidence raises some important questions: Does financialization reduce productive investment financed through internally generated funds? Why do non-financial corporations borrow while they hold large amount of retained earnings? What is the role of internal and external means of finance? The following section deals with these questions.

#### **FINANCING INVESTMENT UNDER FUNDAMENTAL UNCERTAINTY AND INSTABILITY**

For the business enterprise as a going concern to achieve its long-term goal, concrete strategic plans are to be put into place. Let us assume that the growth of the business enterprise in terms of sales, the market share, or capital accumulation is the ultimate goal (Penrose, 1959: 26-30; Eichner, 1976: 23; Lavoie, 1992: 103-105; Lee and Jo, 2011).<sup>6</sup> With this goal in place an investment project is proposed by the management and then evaluated in view of the going concern’s earning capacity and expected cash flows. More specifically, in the course of an investment decision-making process, a number of both quantitative and qualitative variables are considered, such as the internal rate of return, the payback period, legal conformation, relationship with investors and customers, and employee safety (Heller, 1951; Brigham, 1975; Petty *et al.*, 1975; Pike, 1983). Certainly these variables depend largely upon the management’s subjective assessment based on past experience. Thus, the management’s perception of the potential riskiness of a proposed investment project varies due to the specificity of the project under consideration and fundamental uncertainty associated with it. With the difficulty of assessing uncertain outcomes, riskiness is often translated into the probability of not achieving the management-determined target rates of return, the degree of expected variation in returns, the payback period, or market potential (Petty *et al.*, 1975: 166; Gezici, 2007: 103). The highly subjective assessment of riskiness implies that strategic investment decisions have little or

nothing to do with optimal choice that is made under static, isolated, and ahistoric situations (Pike, 1983: 207; Lawson, 2003: 26).

An investment decision must be coupled with a financing decision. It is the latter decision that drives a price decision subsequently. Therefore all three decisions are interlinked as illustrated in Figure 2.

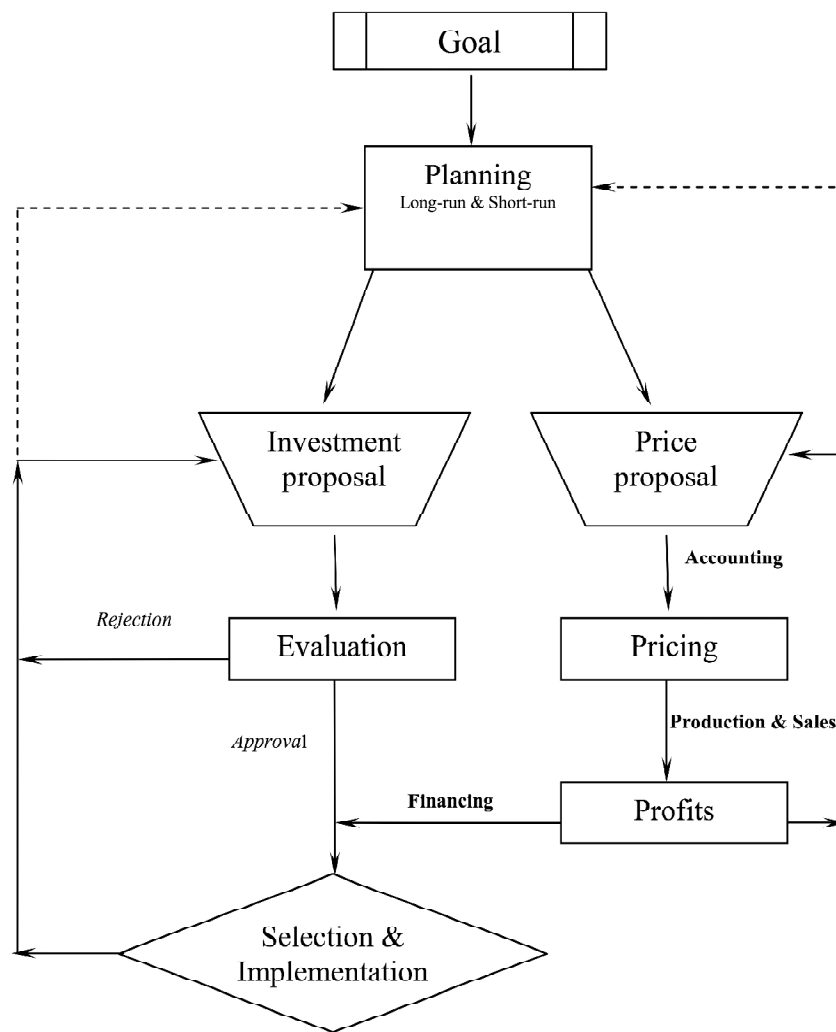


Figure 2: Pricing, Financing, and Investment

With regard to the interdependent and sequential decision making process within the business enterprise, the issue is not whether an enterprise makes the optimal choice between internal financing and external financing, but how it chooses an appropriate means of finance that is likely to achieve a specific goal of the investment. It is conceivable that higher priority is given to internal financing, rather than to external financing, if the decision-maker's perceived riskiness is rising and/or if the control (and continuation) of own enterprise under fundamental uncertainty is a critical concern. That is to say, internal financing is "cheaper" and "safer" means to finance investment than external financing (Gezici, 2007: 89). External financing may be selected, if there is a lack of internal funds, if the cost of external funds is lower than that of internal funds, or if it can be used for a particular purpose—e.g., financial investment (Kliman and Williams, 2015).

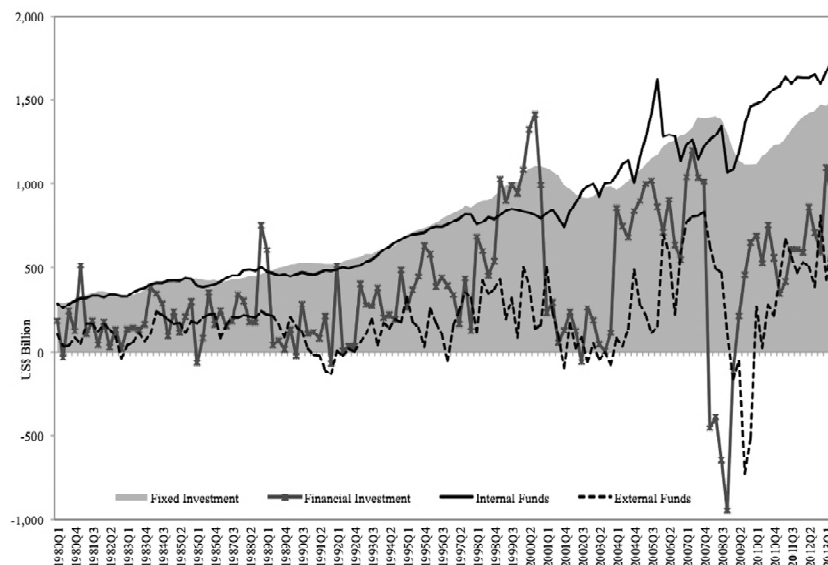
The importance of internal means of finance is also linked to the control of markets by the business enterprise. In the face of constantly changing market conditions, the business enterprise needs to stabilize the market by administering prices, by holding reserved capacities, and by other means of market control (e.g., coalition with competing enterprises, mergers and acquisitions). Under this circumstance, the control of product price (often in the form of administered price) is necessary to the generation of retained earnings (Eichner, 1976: 56; Harcourt and Kenyon, 1976: 449-452; Lee, 1998: 180-183).<sup>7</sup> In a nutshell, in order to continue its business, a going enterprise must undertake an array of strategic actions. In doing so, the capacity to generate internal funds is crucial.

There is significant empirical evidence that non-financial business corporations rely chiefly on retained earnings in financing productive investment. Corbett and Jenkinson (1997: 74, 84) find that internal financing is the main source of fixed investment in advanced economies over the period from 1970 to 1994. In the US, 96.1% of total fixed investment is financed by internally generated funds (Japan 69.9%, Germany 78.9%, and UK 93.3%). There is a clear upward trend in the ratio of internal funds to total sources of finance (1970-74: 74.5%, 1975-79: 91.5%, 1980-84: 89.6%, 1985-89: 103.7%, and 1990-94: 109.8%). They also find that, despite differences in institutional arrangements like the development of capital markets, the corporate governance system, and the globalization of financial markets across selected countries, the dominance of internal financing over external financing appears to be stable over the period. This finding apparently weakens one of financialization hypotheses that shareholder-oriented corporate

governance is conducive to the reduction in internal funds for fixed investment (see Lazonick and O'Sullivan, 2000; Hein, 2012: 37-39; Orhangazi 2008: 117-118).

US non-financial corporations' financing behavior in recent decades shows a similar pattern. Over the period from 1980 to 2013 the average ratio of internal funds (external funds) to gross fixed investment is 98.7% (24.9%) and the average proportion of internal funds out of total sources of fixed investment is 82.7%. The latter appears to be lower than the result reported by Corbett and Jenkinson (1997). This is because the measure of external funds used here refers to the net funds raised in markets (that is, the sum of net equity issues and net credit market instruments; and net equity issues have been negative most of the years since 1980 partly due to the increase in stock buybacks), instead of total liability including taxes, trades payables, and other miscellaneous liabilities that are not closely associated with fixed investment. Moreover, non-financial corporations' acquisition of financial assets—e.g., deposits, mutual funds shares, money market funds shares, security repurchases, government bonds, etc.—is subtracted from equivalent liabilities in order to capture the net flow of external funds to fixed investment. Figure 3 shows that while the flow of internally generated funds has been increasing steadily following the same trend in the flow of fixed investment, the flow of externally borrowed funds moves up and down with an increasing volatility. Right after the financial crisis in 2007, in particular, the flow of external funds declined sharply (due mainly to the decline in bank loans) and returned to positive value in the first quarter of 2010. Although the measures of corporate funds do not exactly reveal what portion of internal/external funds are actually allocated to finance fixed investment, the overall financing pattern of non-financial corporations delineated here entails some important implications.

First, the positive relationship between external funds and fixed investment is hardly discerned. Instead, the variability in the flow of external funds follows (with a time lag) the variability in financial investment, whereas internal funds and fixed investments are more or less positively correlated (see also, Corbett and Jenkinson, 1997; Lavoie and Seccareccia, 2001). It may well be that, as Kliman and Williams (2015) argue, borrowed funds are mainly utilized to finance financial investment as an "additional" source; thus, the movement toward financialization or the shareholder-oriented corporate governance system does not necessarily lessen the importance of internally generated means of finance. Consequently, the non-financial



**Figure 3:** Internal and External Financing of US Non-Financial Corporations, 1980-2013

*Source:* Author's illustration based on data collected from the Flow of Funds Account, Board of Governors of the Federal Reserve System (<http://www.federalreserve.gov/releases/z1/>; accessed 1/17/14).

*Notes:* All flow data. Fixed investment = capital expenditure - inventory change; Financial investment = total acquisition of financial assets; Internal funds = US internal funds (book value); External funds = credit and equity market instruments (or net funds raised in markets) – domestic/foreign demand/time/checkable deposits – money market mutual fund shares – mutual fund shares – security repurchase agreements. External funds measure the net bank finance and net equity finance.

corporations' financing behavior is not readily explained by the supply of and demand for external funds through the financial market (see below for a theoretical discussion about this). Rather, it supports the view that internal funds are not only the main source of investment, but also a critical strategic variable for enterprises to be alive and ongoing, especially when the economy is in recession or economic instability is growing. This argument is also supported by the firm level data. Gezici (2007: ch. 4), based upon the interview of 33 chief financial officers of Turkish manufacturing firms conducted in 2004, reports that large firms make more use of internal funds than small firms because they normally hold enough internal funds for large

investment projects (see also, Carpenter and Peterson, 2002); moreover, for large firms the financial market condition represented by the cost of finance and availability of funds does not play a significant role in making financing decisions. Rather it is the uncertainty in market demand and production cost that is the major impediment to investment. This finding is consistent with Post Keynesian microeconomic studies. Eichner (1976; 2000: 109) argues that most “megacorps” (or firms affiliated with a holding company in Gezici 2007) make more use of internal funds since they have already accumulated enough capital in cash or in assets that can be easily liquefied and banks are likely to favor big corporations over small corporations (see also, Lavoie, 1992: 109). Certainly, the amount of “entrepreneurial capital” and the increase in profits help larger enterprises to finance externally. However the self-limiting nature of financing behavior is observed as well, because the more an enterprise borrows from the banking sector, the more vulnerable to instability it becomes—i.e., the “law of increasing risk” (Kalecki, 1971: 105-107).

Second, the above empirical data has a theoretical implication—that is, the enterprise financing behavior reflected in the data runs counter to standard theories of finance and investment. Modigliani and Miller (1958) hold that the source of financing (or capital structure) does not matter for the valuation of a corporation if it engages in competitive (or efficient) capital markets with perfect knowledge.<sup>8</sup> Aside from a set of problematic assumptions, the Modigliani-Miller theorem does little else than to posit that the efficient financial market determines financing (or the optimal amount of loanable funds), since rational firms would always maintain the optimal capital structure. Apparently, deliberate actions taking place within the corporation and under fundamental uncertainty play no role in the theorem (for a critique of the Modigliani-Miller theorem from a heterodox economic perspective, see Wood, 1975: 40-41; Eichner, 1987:486).

A similar, if not the same, criticism applies to the Post Keynesian macroeconomic account that the level of investment is determined by the supply and demand prices of capital goods (Keynes, 1936: 248; Minsky, 1986: ch. 8). Underlying this theory is the assumption that either internal funds are constant (Lavoie and Seccareccia, 2001) or external funds are proportional to investment. Consequently, Post Keynesian macroeconomists have paid little attention to internal financing, although they admit that both internal financing and external financing are complementary (Davidson, 1972: 348; Harcourt and Kenyon, 1976; Lavoie, 1992: 109). Apart from empirically invalid

assumptions on internal funds in relation to investment, such a financial (market) theory of investment is, arguably, untenable to the extent that it bases itself on the Marshallian supply-demand framework in which resource scarcity and diminishing marginal productivity are assumed (Harcourt, 2004; King, 1995: 3), that the business enterprise is reduced to its balance sheet (Toporowski, 2006), that, as Kalecki remarks, its strategic financing-investment decision-making mechanism is absent (Targetti and Kinda-Hass, 1982: 251), and that it is based upon a problematic or “missing” link between micro-behavior and macro-outcomes (Lavoie and Seccareccia, 2001).

The forgoing discussions imply that if uncertainty and resulting instability are essential characteristics of a capitalist economy, enterprises should make strategic decisions about internal cash flows to contain the vulnerability in their business activities (micro-instability) as well as the instability in the economy as a whole (macro-instability). Closely linked pricing-financing-investment mechanisms at the enterprise level suggest that most business enterprises do not passively take prices (of intermediate capital goods, of surplus goods, and of financial assets), but actively make prices, individually or collectively, so as to achieve their long-term goals. In actually existing markets, as opposed to hypothetical ones, business enterprises organize themselves into various forms, such as trade associations and cartels, for the sake of governing individual markets and, hence, reducing micro-instability. At the same time, the state regulates markets not only to prevent them from collapsing but also to protect private enterprises (Clapham, 1963: 203-314; Kolko, 1963: 2-5; Eichner, 1969; Meyer, 1986; Fligstein, 1990; Prechel, 2000; Jo, 2013).

To sum up, most business enterprises cope with fundamental uncertainty by using retained earnings as a cushion of safety against unstable financial markets. Of course, there is no certainty that enterprises can generate desired retained earnings or profits. The point is that enterprises have to set a target rate of profits (or retained earnings) to continue operating. In addition, business enterprises need to control the market through cartels and trade associations, creating demand for products, and innovating products.<sup>9</sup> These means of market control are not a sufficient condition to survival and growth. Such a purposeful action might have unintended consequences.

## CONCLUSION

Fundamental uncertainty is an inextricable part of socio-economic reality. It cannot be eliminated; nor can it be reduced to probabilistic

risk. Instability is the outcome of fundamental uncertainty. Instability may be contained, if not eliminated, via purposeful actions. The confusion between risk and uncertainty makes neoclassical economics incapable of explaining the fundamental instability of the capitalist social provisioning process—or perhaps neoclassical economists are not concerned with the instability in markets, in the economic system, and in society. In contrast to neoclassical models reflecting their vision of self-adjusting capitalist economy, heterodox economists address the inherently unstable nature of capitalist economy.

This study examined business enterprises' financing-investment decisions that are highly sensitive to fundamental uncertainty and instability in the social provisioning process. Within the enterprise key decisions are made technically, historically, and socially. Fundamental uncertainty requires enterprises to make strategic decisions. To continue and grow over historical time, the enterprise must invest. Investments require financing. Internal financing requires pricing and accounting practices. These enterprise actions are all linked together.

Then how does the going enterprise finance investment? The strategically generated internal means of finance is the main source of fixed investment, especially when the economy is in recession or economic instability is increasing. On the other hand, the positive relationship between external finance and fixed investment is hardly discerned. Even the financialization of non-financial corporations in recent decades has not reduced the importance of internal financing over external financing. This finding has led to a critique of not only the Modigliani-Miller theorem but also the Post Keynesian macroeconomic theory of investment and finance, which lay emphasis on external financing and the determination of investment in the financial market. Alternatively, the main argument addressed in this study is that internal financing is a crucial strategic means for the business enterprise to survive and grow in the face of both micro-instability and macro-instability.

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#### *Notes*

1. In the 1970s, there were important studies on the business enterprise from the heterodox perspective—i.e., Wood (1975), Eichner (1976), Harcourt and Kenyon (1976). Such a theoretical tradition was virtually ignored until recently.



2. The rejection of the micro-macro dichotomy is not in conflict with the call for heterodox microfoundations, since the latter are based upon the view of the social provisioning process where its parts (micro) and the economy as an emergent whole (macro) interact with each other. The term, "microfoundation," is thus meant to put together the components of the economy into a whole and to examine both micro and macro through decisions made by acting agents and organizations, as opposed to reducing macro to micro as in neoclassical microfoundations. Following this methodological viewpoint, the fallacy of composition legitimizing the micro-macro dichotomy can be avoided. For further discussions and applications of heterodox microfoundations, see Eichner (1976; 1987), Jo (2007; 2015), Todorova (2009), Lee (2011a; 2011b; 2012b; 2013), Lee and Jo (2011).
3. Decisions are also made culturally and ideologically. Conventions and norms prevailing in the industry and community in which the enterprise is operating will figure in the business decision-making process. Moreover, its capitalist ethos, business ethics, and cultural values will be the basis of business decisions. For a detailed discussion of a "complex technological society" (represented by the social fabric matrix) in which the business enterprise is embedded, see Hayden (1982; 2011).
4. Note that arrows in the figure indicate delivering and receiving of physical goods/services or money. A more detailed illustration of the economy as a whole from the heterodox microeconomic perspective is presented in Lee (2011b: 1306-1309). While Figure 1 is a simplification of Lee's model, it captures, as described below, key theoretical implications that are relevant to the present issue at hand. Also note that this figure is an abstraction of real world activities focusing on industrial or non-financial enterprises. A reviewer of this paper pointed out that this illustration did not consider the financialization of non-financial enterprises and of the entire economy. True. But space does not permit a lengthy discussion of this important issue. Instead, we would refer readers to Serfati (2008) and Lazonick (2012) for further reading on this issue.
5. In 1982, the U.S. Securities and Exchange Commission (SEC) permitted the repurchase of a company's own stock if buybacks did not exceed 25% of the stock's average daily trading volume in the previous month and if such trading did not occur at the beginning or end of the trading day. Stock buybacks have been greater than dividend payouts in volume since 1997 (Lazonick, 2012: 17-18). In the first quarter of 2001, for example, Exxon Mobil spent \$5,653 million to repurchase its own stocks and S&P 500 companies spent \$89.84 billion for stock buybacks, an amount equal to 45.99% of their total earnings (PR Newswire, 2011). This sort of 'financial' investment financed internally or externally does not necessarily add to the physical growth of the going concern.
6. We are considering "conventional" going concerns operating in the industrial sector. Some industrial as well as financial going concerns may place the pursuit of short-term monetary gains over their survival and growth over time.

7. An alternative explanation of pricing from the Post Keynesian perspective is that profit mark-ups and prices depend upon the degree of competition, monopoly, or industrial concentration (Steindl, 1952: 70-71; Baran and Sweezy, 1966: ch. 3; Kalecki, 1971: 160). This argument is questionable, since 1) it is based upon the notion of imperfect competition (that can be defined only if there exists perfect competition), and 2) there is no sufficient empirical evidence that the degree of monopoly and profit mark-ups (or profitability) are positively related (Tsoulfidis and Tsaliki, 2012). By the same token, it is also questionable to assume that increasing global competition should reduce the pricing power of the business enterprise, since enterprises in coalition (e.g., trade associations and cartels) are able to set local or global prices in the face of changing market conditions (Bina, 2012; Lee, 2012a; Jo, 2013). This is not to say that there is no competition, but to point out that business enterprises, whether they are big or small, make all efforts to control price by making market governance institutions like cartels.
8. By assumption, retained earnings are equivalent to the issue of stocks if the objective of management is to maximize the value of shares through the efficient capital market. The theorem thus implies that there is no difference between equity/internal financing and debt/external financing. Modigliani and Miller (1958: 265) also take into account uncertainty in the context of corporation's 'rational' decision-making behavior. The concept of uncertainty is of course very neoclassical. In the model uncertainty is reduced to a random variable (that is, the mean value over time of the stream of profits) with a probability distribution.
9. This implies that "free markets" do not exist as long as fundamental uncertainty and instability are a matter of course in real life. Furthermore, the business enterprise has to set up a structure of a decision-making process so as to deal with changing socio-economic environment. The reason that the business enterprise exists and flourishes is not simply because it is capable of reducing transaction costs arising in market exchanges, but because it is able to achieve its goal in the face of the ever changing social provisioning process.

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