

# **Owner-manager conflict and financial theories of investment instability: a critical assessment of Keynes, Tobin, and Minsky**

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## **Introduction**

Theories of the capitalist macroeconomy can be divided into those characterized by endogenously generated economic instability and those whose assumptions and structure guarantee the existence and attainment of equilibrium states or paths. We can again partition theories of endogenously generated instability into those in which the roots of instability are located exclusively in the “real” sector, those that root instability in the financial sector, and those models in which instability has dual roots-in which instability may be generated in either sector or simultaneously in both. It is an interesting fact that most theories of economic instability root unstable behavior almost exclusively in *either* the financial *or* the real sector. Marxian crisis theories generally focus on real-sector impediments to balanced growth, as do Keynesian multiplier-accelerator models; in these theories financial markets are either totally neglected or are of distinctly secondary importance.<sup>1</sup> On the other hand, in several important Keynes-inspired theories there are no real-sector impediments to equilibrium; instability is exclusively grounded in ever-changing financial markets.

Potentially destabilizing events can originate in either sector or in both. In turn, impulses for change originating in one sector may have their destabilizing potential either passively transmitted, magnified, or even negated by effects induced in the other sector. The sectors should thus be seen as partly independent but mutually interactive, with important links of mutual codetermination connecting them. In addition, it is important to recognize that the precise structure

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<sup>1</sup> In Marxian theory the rate of capital accumulation depends on the rate of profit. The profit rate is an endogenous variable whose value changes as aggregate demand, cost-price relations, and technology change. Changes in the determinants of the profit rate trigger changes in the pace of investment that alter the state of the economy, and thus the rate of profit. In other words, investment is always responding to conditions that are altered by its response: there is no Marxian steady state.

of interactive relations between the real and financial sectors is institutionally and historically contingent.

Monocausal theories of instability-whether Keynesian, post Keynesian, or Marxist-are badly flawed. Elsewhere (Crotty, 1985) I have argued that Marx himself placed relatively equal weight on real and financial sources of instability and have discussed why Marxists have neglected this financial aspect of his work. This paper asks: *Why have several influential Keynesians developed monocausal theories that root investment stability-the key cause of macroeconomic instability-exclusively in financial behavior?*

Keynesians often mis-specify in two ways the conceptual relation between managers and owners, and therefore incorrectly theorize the relation between the real and financial sectors. First, owners and managers are conceptualized as virtually identical economic agents: i.e., the agents are *conflated*. Hence *one of them becomes theoretically redundant* and can be dropped from the theory. Since owners are the initiators of economic decisions and management only a behaviorally passive agent needed to execute these decisions, it is management that disappears from view. An exclusive focus on the financial roots of investment instability seems to follow naturally.

Second, even if owners and managers are different agents, when their views on corporate investment policy conflict, management is always forced to execute the owners' investment strategy. Ownership *dominates* management, so that management again becomes theoretically redundant and financial theories of investment predominate.

In place of conflation or domination, the conceptualization of owners and managers as semiautonomous (or relatively autonomous or relatively independent) economic agents is presented here. Semiautonomy helps create a realistic theoretical vision of two sectors moving through historic time in an ever-changing, institutionally contingent relationship that is neither one of perfect coordination nor one of complete independence.

Section 1 criticizes three Keynesian theories of investment determination with respect to the questions at issue: Keynes' analysis in Chapter 12 of *The General Theory*, James Tobin's "Q" theory of investment, and the work of Hyman Minsky. In Keynes' Chapter 12 model financial markets *dominate* the real sector, though ownership and management are not conflated. In Tobin and Minsky ownership and management are *conflated*, with ownership behaviorally active and

management behaviorally passive.<sup>2</sup>

Section 2 argues that owners and managers are different economic agents, and discusses the implications of semi autonomy for investment theory. In section 3 two sources of empirical evidence concerning the relationship between owners and managers and between the financial and real sectors are examined. Both suggest that neither conflation nor universal domination of management by ownership is consistent with empirical reality.

### **1. Three Keynesian models of conflation or financial sector domination: management as conceptually redundant**

*Keynes and the casino: Chapter 12 and financial sector domination*

Keynes focused his analysis of instability on the centrality of the investment decision in the capitalist growth process and on the key role played by financial institutions and practices in influencing the decision to invest. He analyzed the investment decision by means of the marginal efficiency of capital (hereafter MEC). The MEC is *the rate of discount* that makes expected future net money yields over the life of the equipment equal to the supply price. In Marshallian terms the supply price is the current cost of buying new equipment from the capital goods industries (Keynes, 1936, p. 135). Keynes assumed that the current production costs of capital goods are given, hence the major source of instability in the MEC schedule is all those factors that influence the entrepreneurs' forecast of the future money revenues and money operating costs of the investment and the confidence that the entrepreneur places in the reliability of his forecast. The potential volatility of investment is, therefore, associated with the potential for changes in expectations of future cash flows.

Many of the key Keynesian determinants of future cash flows are real-sector variables. Nevertheless, just as Keynes did not focus attention on the physical conditions of supply in the capital goods industry, neither did he point to instability in such real factors as the production function or relative prices as a prime cause of investment instability. Nor were fluctuations in aggregate demand the culprit. On the contrary, Keynes rooted aggregate demand instability in a logically prior theory of investment instability based on the volatility of expectations regarding future cash flows. The unknowability of the future is given

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<sup>2</sup> Since Tobin's financial markets are efficient and stable, his economic system is stable. Keynes' and Minsky's financial markets are neither efficient nor stable, therefore their models are characterized by financially rooted investment instability.

a starring role. The formation of expectations, the importance of “confidence,” and the volatility of both are major characters in his story.

Financial markets receive star billing for two distinct reasons. First, as stressed in Chapters 13 through 15, the cost of borrowed funds is an important determinant of investment. Second, Keynes argues-especially in Chapters 12 and 22 of *The General Theory*-that financial markets will inevitably be affected by waves of shareholder optimism and pessimism that impinge upon entrepreneurs' calculations of the MEC and can ultimately dictate enterprise investment policy. Thus Keynes' Chapter 12 analysis seems to be the Granddaddy of, and inspiration for, other Keynesian theories of conflation and domination.

In Chapter 12 Keynes analyzes the effect of expectations and confidence on the MEC; he postpones until Chapters 13 through 15 a discussion of the rate of interest. *He is quite explicit that the analysis in Chapter 12 deals with the MEC itself and not with the cost of funds.* The opening paragraph states that “the marginal efficiency of capital depends on the relation between the supply price of an asset and its prospective yield. In this chapter we shall consider in more detail some of the factors which determine the prospective yield of an asset” (p. 147). Two pages later he states unequivocally that:

we shall assume in the following discussion of the state of confidence that there are *no changes in the rate of interest*; and we shall write throughout the following sections as if changes in the values of investments were solely due to changes in the expectations of their prospective yields and *not at all to changes in the rate of interest* at which these prospective yields are capitalized. (p. 149, emphasis added)<sup>3</sup>

This raises an interesting question of interpretation. Since Chapter 12 is about the MEC and not the cost of financial capital, why is so much of it devoted to an analysis of the stock market? In Chapter 12 Keynes analyzes two potentially conflicting indicators of the expected rate of profit on capital. The first is the direct estimate made by the managers of the enterprise-the traditional MEC

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<sup>3</sup> The opening paragraph of the next to last draft of Chapter 12 also clearly states the assumptions on which the chapter is based. "There is much of great importance which can be said, *quite independent of the rate of interest*, concerning the state of long-term expectation and the methods by which the prospective yield of investment is estimated by the market, as distinct from the methods by which this prospective yield is capitalized. ...In what follows we shall *abstract from changes in the rate of interest* and speak, throughout the chapter, as if changes in the value of investments were solely due to changes in the expectations of their prospective yield and *not at all to changes in the rate at which this prospective yield is capitalized*" (*Collected Works*, vol. 14, pp. 464-465, *emphasis added*).

schedule. The second is the index of expected profitability *implicit* in the financial market value of the firm. The higher the value of the firm's stock, *ceteris paribus*, the higher the "market's" implicit estimate of enterprise profitability—a thesis later formalized in Tobin's Theory Q.<sup>4</sup>

Keynes' discussion here is inconsistent because at times he talks of a change in share prices - a market determined variable - shifting the MEC schedule—a management-determined function: "a high quotation for existing equities involves an increase in the marginal efficiency of the corresponding type of capital" (p. 151 ).<sup>5</sup> Nevertheless, his conclusion is that when these two indicators of prospective yield give conflicting signals about the direction and pace of investment spending, it is the view of the stock market that prevails: owners dominate managers. Keynes states this conclusion any number of times.<sup>6</sup>

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<sup>4</sup> This is not to argue that financial investors and enterprise managers both attempt to estimate the long-term rate of profit on capital. As we explain in the next section, stockholders and managers are different agents, with different objectives, constraints, planning horizons, and information. Financial asset prices are often determined through the speculative pursuit of short-term capital gains. The point here is simply that an increase in the market value of the firm (holding the discount rate constant as Keynes says he is doing in this chapter) can be interpreted as an increase in *some* stockholder estimates of expected profitability.

<sup>5</sup> In a footnote on page 151 of *The General Theory*, Keynes points out that a rise in the price of equity has the same effect on investment as a drop in the rate of interest because "investment depends on a comparison between the marginal efficiency of capital and the rate of interest." This passage has been interpreted to suggest that Keynes associated rising stock prices with a reduction in the rate of discount of the stream of expected money yields over the life of the capital good and thus with an increase in its demand price. While such an interpretation would be consistent with the assumptions used in other sections of the book—Chapter 17, for example—it cannot be valid in Chapter 12 where Keynes explicitly assumed constancy of the interest rate (and of the supply price of capital). Thus, in this chapter a rise in stock prices can only be associated with an increase in expected quasi-rents on capital.

<sup>6</sup> The following quotations from *The General Theory* embody Keynes' assumption that owners' estimates of expected profitability implicit in the value of the firm's equity dominate management's MEC calculations when the two conflict:

a. "the daily revaluations of the Stock Exchange, though they are primarily made to facilitate transfers of old investments between one individual and another, inevitably exert a decisive influence on the rate of current [capital] investment" (p. 151).

b. "investment [is] governed by the average expectation of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectations of the professional entrepreneur" (p. 151).

c. "we found that the marginal efficiency of capital is fixed, not by the 'best' opinion, but by the market evaluation as determined by mass psychology" (p. 170).

d. "I have shown above [Chapter 12] that, although the private [financial] investor is seldom himself directly responsible for new investment, nevertheless the entrepreneurs, who are directly

The determination of the prospective yield on capital by the stock market would not cause instability in Keynes' theory if it were also assumed that the market was populated by informed investors who chose stocks on the basis of their prospective yields over the long run. However, Keynes' stock market did not have valuation efficiency: it was dominated by relatively ignorant speculators pursuing short-term capital gains.

The main reason why the market behaved in this fashion, Keynes believed, was the increasing separation that had taken place between ownership and management: there had been a "gradual increase in the proportion of ...equity...which is owned by persons who do not manage and have no special knowledge of the circumstances, either actual or prospective, of the business in question..." (p. 153). In Keynes' view, the combination of the inherent unknowability of the future, the liquidity provided by a broad and deep stock market, and the increasing significance of ill-informed investors trading for short-term gains, led to stock prices that could be very unstable.<sup>7</sup>

Thus, capitalism is unstable because investment is unstable and investment is unstable even when the interest rate is steady primarily because equity markets are unstable. Keynes theorized owners and managers as distinct agents with different objectives and planning horizons-the former seek short-term capital gains, the latter the long-term viability and growth of the enterprise itself-and significantly different degrees of knowledge about the firm and its environment-the former are relatively ignorant, the latter are professionally well-informed.

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responsible, will find it financially advantageous, and often unavoidable to fall in with the ideas of the market, even though they themselves are better instructed" (p. 316).

Quotations b and d make especially clear that Keynes is talking about estimates of the prospective yield on new capital-about the MEC-and not about the cost of financial capital. If he was discussing the fact that stock prices merely influence investment by affecting the cost of capital, the phrase "rather" in b would make no sense, while the phrase "even though they themselves are better instructed" in quotation d would be equally senseless. Clearly, Keynes is discussing conflicting estimates of expected profit or expected yield-conflicts over the effective MEC-here.

<sup>7</sup> The price of a stock, Keynes tells us: "which is established as the outcome of the mass psychology of a large number of ignorant individuals is liable to change violently as the result of a sudden fluctuation of opinion due to factors which do not really make much difference to the prospective yield; since there will be no strong roots of conviction to hold it steady. In abnormal times in particular, when the hypothesis of an indefinite continuance of the existing state of affairs is less plausible than usual even though there are no express grounds to anticipate a definite change, the market will be subject to waves of optimistic and pessimistic sentiment. which are unreasoning and yet in a sense legitimate where no solid basis exists for a reasonable calculation" (p. 154).

Keynes believed that equity markets could dictate the pace of investment when the yield estimates of ownership and management clashed: the financial sector dominates the real sector.

Assume that the stock market has the potential instability Keynes assigns to it. After all, it is widely accepted that even in the post-World War II era stock prices fluctuate to a far greater degree than can be explained *ex post* by movements in the real economy.<sup>8</sup> What about the general validity of his second proposition? Should the nonfinancial enterprise and its management be conceptualized as a simple transmission mechanism through which valuation decisions made autonomously in financial markets are executed, one with no independent effect of its own?

In Chapter 12 Keynes offers only two arguments in support of this key thesis; both are contained in one long sentence. First: “there is no sense in building up a new enterprise at a cost greater than that at which a similar existing enterprise can be purchased.” Second: “there is an inducement to spend on a new project what may seem an extravagant sum, if it can be floated off the Stock Exchange at an immediate profit” (p. 151). Keynes' second argument, while valid, is not relevant because it is about the cost of financial capital, not the determination of the MEC. Keynes' first argument is germane, but it cannot support the general validity of his thesis. It addresses a situation in which an enterprise that wants to expand its productive capacity can do so either by ordering newly produced capital goods or by purchasing an existing corporation. Keynes, argues, quite reasonably, that if the market value of the target corporation is below the supply price of newly produced capital, the expanding enterprise should acquire it. In other words, when the market value of acquirable firms is lower than the supply price of newly produced capital, the latter should replace the former in management's MEC calculation.

But note the limited relevance of the example to the general proposition. First, the argument refers to the supply price of capital, not to projections of future profitability. Second, the argument is not symmetric; when rising stock prices lift the market value of acquirable firms above the supply price of newly produced goods, the market no longer directly influences the relevant MEC. Third, and most important, there is no example presented in Chapter 12 in which the

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<sup>8</sup> In neoclassical financial economics, stock and bond prices are efficient estimates of the present value of the expected future earnings on these assets. But as Robert Shiller has demonstrated in a number of papers (see, for example, Shiller, 1981), financial asset prices are far more variable than the fundamentals they are supposed to reflect. Financial markets *are* highly speculative.

managers of a firm must follow the market's evaluation of profitability when it differs significantly from their own MEC estimate. In the example just examined, both the firm and the market agree that the cost of acquisition is lower than the supply price. In other words, there is nothing in Chapter 12 that would demonstrate the *general or universal validity* of such statements as: “the marginal efficiency of capital is fixed...by the market valuation as determined by mass psychology” (p. 170).

Chapter 12 thus describes a world in which: (1) owners and managers have different objectives and different planning time horizons; (2) owners and managers have different information and, therefore, different estimates of the prospective yield on capital; (3) stockholders, not managers, determine investment when their views conflict; (4) financial markets are unstable; and (5) investment is unstable *because* the MEC (as well as the interest rate) is determined in unstable financial markets. *Keynes' Chapter 12 model thus has financial sector domination without conflation, and instability rooted in financial markets.* However, Proposition (3) is not adequately defended in Chapter 12 and moreover is not universally valid and, therefore, proposition (5) is also not universally invalid.

#### *Tobin's Theory “Q”: Extending Chapter 12 beyond its logical conclusion*

Throughout much of the 1960s and early 1970s, the dominant theory of the determination of investment spending was the neoclassical theory of investment popularized by Dale Jorgenson. It has largely been supplanted in the past decade or so by Tobin's securities-valuation theory of investment, popularly known as Theory Q. For example, Fisher and Merton comment that “Q theory...is now the preferred theoretical description of investment” (1984, p. 29). Tobin sees Theory Q as an appropriate extension of Keynes' Chapter 12 theory of investment.

The core of Theory Q is the assumption that the enterprise will continue to invest in physical assets as long as the ratio of the market value of the firm to the current replacement cost of the firm's reproducible capital assets—the ratio Q—is greater than one. The basic idea behind the theory according to Tobin “was expressed succinctly by Keynes” who provided “the common sense justification for paying attention to the [Q] ratio” (1977, p. 237). To support this assertion he cites a key quotation from Chapter 12:

[The] daily revaluations of the Stock Exchange, though they are primarily

made to facilitate transfers of old investments between one individual and another, inevitable exert a decisive influence on the rate of current investment. (p. 151)

Tobin begins his analysis with the assumption that stockholders and managers have the same objective, namely the maximization of the market value of the firm's common stock. He immediately joins this assumption to another, that the best judge of whether investment will or will not increase the market value of the common shares is the market itself. In place of Keynes' irrational "casino," Tobin substitutes "well organized and efficient" markets for corporate securities (1977, p. 237).<sup>9</sup> Tobin's stable and efficient financial markets provide "a continuing market valuation of the enterprise, and thus indirectly of the productive assets of the company" (p. 237); *they therefore both evaluate the prospective yield on capital and set the cost of financial capital*. Tobin succinctly summarizes his theory in the following quotation:

An investment project should be undertaken if and only if it increases the market value of the firm. *The securities markets appraise the project*, its expected contributions to the future earnings of the company and its risks. If the value of the project *as appraised by investors* exceeds the cost, then the company's shares will appreciate to the benefit of the existing stockholders. That is, the market will value the project more than the cash used to pay for it. (1977, p. 242, emphasis added)

Tobin's model is a neoclassical general equilibrium model. All agents in this model have identical information and form identical, conditionally correct expectations of the future. Since enterprise management and the firm's stockholders also have the same objectives, there is nothing that management knows, expects, or desires that is not simultaneously known, expected, and desired by the stockholders. There is a complete *conflation* of ownership and management. Yet even within Tobin's conflation it is the shareholders who are

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<sup>9</sup> In a 1984 article titled "On the Efficiency of the Financial System," Tobin appears to recant his belief in the valuation efficiency of financial markets. He tells us that "market speculation multiplies several fold the underlying fundamental variability of dividends and earnings" (p. 6). He comments on the "chronic under valuation" of real assets by financial markets over the preceding decade. "Takeover mania, motivated by egregious under valuations, is testimony to the failure of the market on this fundamental-valuation criterion of efficiency," he notes (p. 6). He then argues that Keynes' characterization of the stock market as driven by short-term speculation is appropriate today. "Keynes' view would be confirmed today if he observed how professional portfolio managers seek safety from criticism in short run performances that match their competitors and market indices" (p. 7).

behaviorally active. It is “securities markets [that] appraise the project”; management's only role is to execute decisions made for them in financial markets.

Note how profoundly different Tobin's vision of the world is from the one Keynes constructs in Chapter 12. Keynes' world is characterized by true uncertainty or unknowability, not by certainty-equivalence. Keynes' financial markets are an arena in which “large numbers of ignorant individuals” make decisions based on “mass psychology” and cycles of optimism and pessimism. Keynes' “casino” is Tobin's stable, “well organized and efficient” securities market. Keynes' enterprise managers are well-informed professionals interested in the long-term well-being of the firm who know as much about their firm and its future prospects as one can hope to know in an uncertain world; they are forced against their better judgment to follow the dictates of an ignorant stock market. Tobin's manager and his financial investor, on the other hand, are equally knowledgeable and equally rational. *As economic agents they are virtually indistinguishable.*

Tobin thus salvages Keynes' Chapter 12 conclusion that securities markets determine investment only at the cost of the complete transformation of Keynes' model and his vision. Ironically, Tobin places Keynes' stamp of approval on the rational expectations, efficient-markets general equilibrium models that are the modern extensions of the classical theory Keynes so vehemently opposed.

### *Minsky's financial theory of instability*

The writings of Hyman Minsky have enriched our understanding of the nature of instability in the modern capitalist economy and have helped introduce a new generation of economists to the theoretical insights and contributions of John Maynard Keynes. However, like Keynes in Chapter 12, Minsky roots instability exclusively in the financial sector; he is a monocausalist. And, like Tobin, Minsky treats enterprise managers and shareholders as if they were conceptually indistinguishable; he is a conflationist. Moreover, as suggested in Theory Q, although owners and managers are virtually identical, all the decision-making “action” in Minsky's model occurs in financial markets.

There are two key building blocks in Minsky's work on capitalist instability: his theory of profit determination and his theory of investment. In *John Maynard Keynes* (1975) Minsky did not have much to say about the

determinants of the rate, level, or share of profit. In recent years, however, Minsky has adopted the theory of profit associated with Michael Kalecki, with Cambridge growth models, and with Post Keynesianism in general (Minsky 1982 and 1986). In this approach, investment generates income while the price mechanism simultaneously determines the profit share and the percentage of income that is saved. To investigate the potential for the development of instability in the real sector of Minsky's model, we must ask whether it ever produces a pace of accumulation that generates insufficient profits or savings or aggregate demand to sustain itself. The answer is that it does not.

For Kalecki, the exogenous “degree of monopoly” determines the markup that corporations apply to prime unit costs to set prices; the markup determines the profit share of income. Under Kalecki's standard assumptions, the size of the markup and thus the profit share is independent of investment, output, and employment, an assumption that many economists who stress real-sector roots of investment instability would reject.<sup>10</sup> Therefore, every change in the level of investment triggers changes in output and income that must continue until profits—a fixed percentage of income—change by enough to make savings balance the new investment level.

Thus, every conceivable level of gross investment will generate an equal level of gross saving, so that aggregate excess demand will be zero at every level of investment: every level of investment is self-sustaining. Moreover, the assumed constancy of the markup and profit share guarantees that the rate of profit on investment is likewise constant, no matter what the level of investment. This means that the high rate of investment of the boom can never initiate a chain of real-sector developments - such as, for example, rising raw materials prices, rising real wages, falling rates of productivity growth, increased import competition, or market saturation - that lower the rate of profit, and therefore cause a decline in the rate of investment, production, and employment. Nor is there ever a rising rate of profit which, as in Baran and Sweezy (1966) or Steindl (1952), leads to aggregate demand deficiencies and stagnation. There are no real-sector mechanisms that can disrupt the pace of investment spending.

Minsky is quite emphatic about this last point. An investment decline can never be *initiated* by a prior decline in the expected profitability of investment;

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<sup>10</sup> For empirical evidence on the variability of the markup or the profit share, see, for example: Holland and Myers (1980, pp. 320-325), Moore (1980), Weisskopf (1979, pp. 351-378), Hahnel and Sherman (1982, pp. 49-74), Allman (1983, pp. 19-26), Pulling (1978), Nordhaus (1974, pp. 769-788), and Gordon (1982, pp. 89-152).

rather, it takes an initial drop in investment to induce a *subsequent* decline in profits. Investment and profits are not mutually codetermining; investment spending calls the tune and profits dance accordingly. As Minsky puts it:

In the simplest Kalecki case, where aggregate profit equals aggregate investment, the shortfall of realized profits below anticipated profits requires a logically prior shortfall of investment. This leaves the question of...crises...and...depressions unexplained, for it is the decline in investment that has to be explained. (1982, p. 25)

Minsky's view on this point is also summarized in the following quotation:

The profitability of existing capital - and profit expectations - can only change if investment and expected investment [first] decline. Thus we have to look elsewhere - to arguments other than those derived from assumed properties of production functions and hand waves with regard to over-investment - to explain why the marginal efficiency of investment falls. The natural place to look within the Schumpeter-Keynes-Kalecki vision is in the impact of financing relations. ...(1983, p. 13)

Thus, Minsky can find no impediment to perpetual balanced growth in the real sector of the economy.<sup>11</sup> The roots of instability in Minsky's model are to be found in financial markets.

Minsky presents investment demand as a function of the difference between the demand price and the supply price of capital goods. In Minsky's investment model, the determination of the market value of the firm and the determination of the firm's demand price for real capital are conceptually conflated. There is nothing that the decision-makers in Minsky's industrial enterprise know (information), foresee (expectations and confidence), or desire (objectives) that is not simultaneously known, foreseen, and desired by financial portfolio selectors.

This being the case, the market value of the firm can substitute for any MEC-type calculation by management and the concept of independent managerial decision-making can be dispensed with because it is redundant. Minsky summarizes his financial theory of investment as follows:

Two market-determined prices are dimensionally equivalent to the capitalized value of the Q's [the vector of expected future profits held in common by owners and managers]: the market price for items in the stock

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<sup>11</sup> For a more detailed critique of Minsky on this point, see Crotty (1986).

of capital assets and the price of equities of shares.

Share prices affect the marginal efficiency of capital as “a high quotation of existing equities involves an increase in the marginal efficiency of the corresponding type of capital...” (Keynes. 1936. p. 151). More directly, share prices together with the market value of debts give us a market valuation of the bundles of capital assets collected in a firm. *If the market valuation is high relative to the supply price of such assets newly produced, then presumably the pace of investment in such assets will be stepped up.* (1975. p. 101. emphasis added)<sup>12</sup>

This is Minsky’s variant of Theory Q. Of course the two models are not equivalent. Whereas Tobin creates a vision of efficiency and stability, Minsky develops a complex and realistic model of instability that enriches the insights of Keynes. Nevertheless, with respect to the issue of conflation, Minsky occupies the same conceptual ground as Tobin and as neoclassical theory in general.

## **2. In support of semiautonomy: why owners and managers must be conceptually distinct**

Both Tobin and Minsky have gone beyond Keynes' Chapter 12 treatment of enterprise management as dominated by stockholders and have accepted the standard neoclassical conflation of the two agents. For all practical purposes we could replace the capital budgeting unit of the enterprise in their theories with a telephone: one call to a stockbroker to establish the market value of the firm, and one call to a contractor to establish the replacement cost of the firm's physical assets, would suffice to determine investment spending. This conflation has contributed to the financial sector monocausalism of their models. There are, however, sound theoretical reasons for insisting upon the semiautonomy of ownership and management.

Before turning to a comparison of owners and managers, a comment on the role played by their conflation in neoclassical theory is in order. The conflation of ownership and management uniquely molds the neo-classical theory

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<sup>12</sup> In *Stabilizing an Unstable Economy* Minsky takes the same position: "The theoretical argument of how investment is determined involves a comparison of the [demand] price of capital assets and [the supply price] of investment output. In a corporate capitalist economy with a stock exchange, the market's valuation of a firm's capital assets and market position substitutes for the [demand] price of capital assets" (1986, p. 186).

of the firm: if one rejects owner-manager conflation, it is not at all clear that a coherent neoclassical theory of the firm exists at all. Without conflation there is no agreed-upon specification of the firm's objective function, its constraint set, or its cost of capital. While most neoclassical theorists assume away the problems caused by owner-manager (or principal-agent) differences, there is a burgeoning "agency theory" literature in neoclassical financial economics that posits owners and managers as distinct economic agents. However, this literature requires extreme theoretical contortions and a flight from institutional realism to generate its central conclusion that the existence of principal-agent conflict does not interfere with the efficiency and rationality of neoclassical markets.

To begin with, it trivializes and distorts the issue by defining the agency problem as the propensity of managers to shirk- "to consume more on the job than is agreed on in his contract" (Fama, 1980, p. 296) - rather than as conflicting goals *for the enterprise*. This redefined problem is then resolved either through the assumption that "rational" contracts and efficient capital and managerial labor markets force managers to act as owners want them to, or the assumption that, because these markets force managers to bear all agency costs, deviations from market value maximization are minimal and efficiency preserving.<sup>13</sup>

These neoclassical models assume perpetual market clearing, strong rational expectations (agents know the correct model of the economy in its most minute micro detail), efficient markets (in which, for example, financial asset prices correctly reflect future earnings flows, and members of boards of directors get paid their marginal product), and so forth. Worse, institutions are themselves efficient in that they always facilitate, never impede, efficient contracts between all the individuals in contact with them. Indeed, in this literature the firm itself does not really exist: "most organizations are simply *legal fictions which serve as a nexus for a set of contracting relationships among individuals*" (Jensen and Meckling, 1980, p. 310, emphasis in original). Ironically, the very fact that agency theory requires such an extensive set of heroically unrealistic assumptions to prove that standard neoclassical results hold in a world of potential owner-manager conflict only demonstrates the extent to which neoclassical theory requires principal-agent conflation.<sup>14</sup>

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<sup>13</sup> For a representative sample of this literature, see Fama (1980), Jensen and Meckling (1976), and Fama and Jensen (1983).

<sup>14</sup> Stiglitz (1985) has summarized the status of agency theory quite well: "Modern [agency] theorists ... have argued that there are mechanisms which ensure that managers who do not act in the interests of their shareholders get replaced. I would like to think of this as a triumph of theory

There is an alternative literature since at least Berle and Means dealing with managerial, behavioral and institutional alternatives to conflationist theories of the enterprise.<sup>15</sup> The following conceptualization of management is broadly consistent with this literature. The top managers of large nonfinancial corporations have typically served with their current enterprise for a long period of time and identify with it: the firm's success is their success. The primary objective of top management is the *long-term reproduction, growth, and safety of the firm itself*, and, through these, its own status and security. Stockholder interests are not an objective pursued by management but rather a constraint upon it.

Management wants to maximize the size and power of the firm and the share of the primary markets in which it operates, not the current market value of the firm. It is interested in the status of the firm in the coming years and even in the coming decades, not just in short-term profits. The capital investment decision will be considered to be of the utmost importance by management because it is the most important, most risky, and least reversible influence on the intermediate and long-term prosperity of the enterprise. The main constraints on managerial pursuit of its objectives derive from its dependence on several major enterprise "constituencies." The ones that most interest us here are the capital market constituents. Maximizing growth and meeting competitive threats to market share often require more financial capital than the firm can generate internally. But the two most obvious ways to increase the funds available to the firm - lowering the dividend payout ratio and borrowing from creditors - will, at some point, threaten managerial autonomy. Yet management must retain control of the enterprise to achieve any other objective: top managers are not especially concerned with the long-term prospects of firms that they used to work for. When autonomy is threatened, whether by disenchanted stockholders, corporate raiders, or concerned creditors, all other objectives become subsidiary to the struggle to retain autonomy. Thus, for the managerial firm, dividend payments, like interest payments, are a cost of autonomy from capital market constituents; the desire for

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over facts...; in fact, it appears to be more of a triumph of ideology over theory and fact. ...

Why is it in the self-interest of nonowner-managers to maximize...the stock market value of the firm? Three arguments have been put forward-stockholder meetings, takeovers, and 'voting with dollars.' I ...show that none of these is very effective as a control mechanism" (pp. 134-136).

Stiglitz also shows that any equilibrium with owner-manager conflict is Pareto inefficient.

<sup>15</sup> See, for example, the reviews in the *Journal of Economic Literature* by Cyert and, Hendrick (1972), Marris and Mueller (1980) and Williamson (1981). The characterization of management to follow is strongly supported by the empirical research presented by Donaldson and Lorsch (1983) in their widely cited study of managerial behavior in large industrial corporations.

growth must be balanced against the need to keep shareholders passive; and the use of debt capital must be kept within limits that protect managerial autonomy.<sup>16</sup>

The owners of the firm are conceptually quite different from management. It is not possible to present a universally valid description of the typical stockholder because the distribution of stock ownership between large and small individual holders, and between individuals and institutions, has changed rather dramatically over time, as has the percentage of stock portfolios that are professionally managed. And professional portfolio management practices themselves have changed substantially in the past few decades. However, we can characterize the behavior of present-day stockholders and can compare and contrast them with our characterization of enterprise management.

The two most relevant facts about present-day stockholders are, first, that institutions, not individuals, own the great majority of stock and totally dominate stock trading, and, second, that these institutions turn over most of their portfolios in the course of a year. To exaggerate only slightly, *there are no long-term stockholders anymore*; stockholders typically have only a fleeting relation with any particular enterprise. To an ever-increasing degree, stockholders have very short-term planning horizons and are primarily interested in achieving short-term capital gains and avoiding short-term capital losses.

The contrast with management in this regard is striking. If shareholders are not especially interested in the intermediate to long-term prospects of any individual enterprise because their portfolios are both diversified and in constant flux, they will not be particularly concerned with investment policy except with regard to its short-term impact on stock values. And if they are not concerned with investment policy and they are rational, they will not make a major effort (which is costly in time and money) to obtain the best possible estimates of the information on which investment decisions are based. For these reasons, enterprise management will always have more complete and higher-quality information about those variables that determine the expected profitability of a prospective capital investment than even the best-informed stockholders, never mind Keynes' "ignorant individuals."

Moreover, while the important assets in the typical stockholder's portfolio are relatively liquid, the most important assets held by the enterprise - physical capital assets - often are not. Therefore, unlike financial asset acquisition, the capital investment decision is, to a substantial degree, *irreversible* and therefore

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<sup>16</sup> See Donaldson and Lorsch (1983), pp. 6, 7, and 47.

inherently more risky than the purchase of a share of stock. Neoclassical investment theory and portfolio selection theory as typically applied to the enterprise assume perfect resale markets for capital assets and therefore complete reversibility of the investment decision. As Bosworth has commented: “the major feature of investment in practice that continues to be ignored in theory is its irreversibility” (1981, p. 131).

To the extent that stockholders and managers do have significantly different objectives, constraints, time-horizons, information, and liquidity of assets, the fundamental assumption made in neoclassical theory, general equilibrium theory, and by Tobin and Minsky, that owners and managers are virtually identical economic agents is incorrect, and this conceptual error creates serious problems in many applied areas of theory.<sup>17</sup> Consider the following four differences between owner-oriented and manager-oriented investment policy. First, both the difference in liquidity between common stock and physical capital and the diversification of most financial portfolios suggest that owners would be more tolerant of corporation-specific risk than managers and would prefer higher corporate debt-equity ratios than managers. Indeed, the leveraged mergers and raids of the 1980s and the defensive, leveraged stock buybacks of the era have forced corporate leverage well beyond the managerial comfort zone. *Ceteris paribus*, investment should be constrained in the future by a managerial desire to lower corporate leverage.

Second, because management seeks long-term growth in the size of the firm, it will often push capital accumulation beyond the point that maximizes return on shareholder equity.

Third, the short horizon of shareholders and the liquidity of their assets imply that stock prices and Q values will respond to unforeseen short-term changes in corporate profit flows. The long-term horizons of managers and the risk aversion associated with the accumulation of illiquid assets, on the other hand, suggest that the pace of investment will be relatively insensitive to such short-term changes. Thus, the lag between changes in Q and changes in investment spending might be long and variable and the correlation between Q and investment could be weak in the short to intermediate run.

Fourth, owners and managers will often respond differently to an increase

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<sup>17</sup> I obviously do not mean to suggest that all Keynesians and Post Keynesians are guilty of this conceptual error. To take but one counterexample, the relation between owners and managers presented in Chapters 4 and 10 of Paul Davidson's *Money and the Real World* is perfectly consistent with the position I have taken in this paper.

in the intensity of competitive pressure confronting the firm. Committed to the reproduction of the firm itself, management might increase cost-cutting investment in response to a competitive threat to the firm's viability even though owners, concerned only with short-term return on equity, would tend to sell the firm's stock (and thereby lower Q) in response to a competition-induced decline in profits. Consider an important example of this difference. During the mid 1980s, domestic manufacturing enterprises faced increasingly effective import competition caused by the rising value of the U.S. dollar. The flood of relatively cheap imports reduced the profitability of the typical enterprise. Investors in response often dumped the firm's common stock, driving the market value of the firm down, pushing Q even further below one.

But management often faced the choice of either investing in additional capital assets to help lower unit costs and remain competitive or being driven out of business. In many cases, management undertook the investment needed to survive. *Business Week* characterized the economic situation in 1985, prior to the fall in the dollar, in terms similar to our example. Keep in mind that Q was estimated to be substantially below one at the time.

One possible explanation [of the surprising strength of manufacturing investment spending plans] is that the economy is at a point where imports are depressing traditional capital spending indicators such as operating rates and domestic equipment orders while they are actually spurring investment. In a world characterized by excess global capacity, intense international competition, and rapid technological change, *the choice for many U.S. industrial companies may be to invest or die.* (4/8/85, p. 24, emphasis added)

For these manufacturing firms, Q had collapsed but investment did not. Nor is this example unique. In the late 1970s aggregate Q stayed at around one-half while investment expanded rather vigorously.

Finally, consider the following example of managerial semiautonomy. In the year ending August 1987, Q was raised by a speculative run-up in stock prices not associated with any discernible improvement in economic fundamentals. Stock prices then collapsed in the two following months: again, there were no major economic changes associated with this dramatic shift in stockholder sentiment. Not surprisingly, corporate managers failed to increase dramatically investment spending when Q rose, and they did not cut investment spending when Q fell. Clearly, an increase in Q does not automatically stimulate investment any more than a decline in Q automatically retards it.

This is not to argue that managerial and shareholder decisions are independent of one another. Both management and wealth-holder decisions have macroeconomic effects that change the environment within which the other agent operates. Fluctuations in investment may be triggered by decisions made by either set of agents. But no matter which sector initiates change, its effects reverberate in both sectors. When firms decide to pick up the pace of investment (either because profit expectations have improved and they want to increase investment or because competition has increased and they are forced to increase investment), growth rates, profit rates, inflation rates, savings flows, and so forth, all are subject to change; these changes in turn affect financial markets.

On the other hand, a relatively autonomous rise in financial market optimism or decrease in investor risk aversion can lower the cost of capital and improve the mood of management and thereby stimulate investment. Though managers and owners are distinct economic agents, they are influenced and affected by each other's decisions: they are only *semiautonomous*. *In a macrotheory with semiautonomous agents, fluctuations in  $Q$  can induce (and lead) changes in investment spending, fluctuations in investment spending can stimulate (and lead) changes in  $Q$ , or  $Q$  and investment can, for a time, move in opposite directions.* The financial theories of investment espoused by Tobin, Minsky, and the Keynes of Chapter 12 are simply wrong. To understand the determination of investment spending and theorize investment instability, we must study and model the managerial enterprise as well as financial markets; there is no legitimate shortcut through the conflation of agents.

Are there any particular circumstances in which Keynes' Chapter 12 theory of financial sector domination is valid? The answer is yes, but if and only if the undertaking of such investment commitments will threaten to trigger a hostile takeover by another firm, or a stockholder revolt strong enough to threaten the removal or replacement of some key subset of management and/or significant restrictions on managerial autonomy. Under these circumstances, the initiation of long-term investment projects (that will lower cash flow and liquidity in the short run) could cause a wave of selling by shareholders, a substantial decline in the market value of the firm, and therefore a significant rise in the probability of a hostile takeover or a stockholder revolt. These are the only circumstances under which Keynes' statement that "entrepreneurs ...will find it ...often unavoidable to fall in with the ideas of the market even though they themselves know better" is valid. Interestingly enough, these circumstances have in fact characterized the American economy in recent years.

### 3. In support of semiautonomy: empirical evidence

Econometric tests of Theory Q and case studies of management- stockholder relations are two kinds of empirical evidence relevant to the domination-conflation-semiautonomy debate. If either conflation or universal domination characterized owner-manager relations, then the decision to investment should be influenced by the current value of Q alone because Q is assumed to incorporate all information relevant to the investment decision.<sup>18</sup> In fact, direct econometric tests of Theory Q have been somewhat disappointing. Two supporters of the theory conclude that “the empirical success of the Q theory is mixed” (Fisher and Merton, 1984, p. 30), while Barry Bosworth sees only “an extremely weak empirical correlation between the stock market and investment” (1981, p. 130). Several comparative econometric studies found Theory Q to be econometrically inferior to alternative theories.<sup>19</sup>

The case study approach leads to the same conclusion. The battles between corporate managers and hostile corporate “raiders” that have raged on Wall Street in the past decade constitute as forceful a demonstration as one could hope for of the falsity of the proposition that managers are passive instruments through which stockholders' objectives are pursued and stockholders' decisions are executed. Descriptions of these battles in the business press depict an intense struggle between ownership and management over the objectives and priorities of the enterprise, including its investment policy stance.

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<sup>18</sup> Disappointment with econometric results from Tobin's Theory Q has generated spin-off theories in which investment responds to marginal rather than average Q. The innovation here is the assumption that the expected rate of profit on investment is often significantly different from the rate of profit on capital-in-place, a perfectly reasonable assumption. However, this innovation throws the theoretical baby out with the bath water because marginal Q is unobservable—there is only one stock price. The managerial investment decision-making *process* cannot possibly be guided by an unobservable variable. Thus, the use of marginal Q represents no more than a return to the traditional neoclassical act of faith that management pursues shareholder interests. For this we did not need Tobin.

<sup>19</sup> See, for example, the comparative econometric studies reported in Clark (1979) and Kopke (1982) as well as the comments by Greenspan and Tobin on Clark's paper. In evaluating econometric tests of Theory Q it should be kept in mind that some positive correlation between investment demand and Q would exist even if the theory was false. After all, Q is a function of the cost of financial capital and the price of capital goods, two variables that play a role in many theories of investment. And even semiautonomous managers and stockholders will often share in a general mood of optimism or pessimism.

Seeking to maximize short-term gains, stockholders support one of two strategies to maximize the market value of the firm's equity. The first calls for the sale of the firm to any group that will pay a substantial premium above current market value. The second calls for management to raise money through borrowing and the divestiture of assets and to transfer these funds directly to stockholders through a stock repurchase or an extraordinary dividend.<sup>20</sup>

To management, both of these strategies represent personal and/or corporate disasters. The sale of the firm often costs the current management its control of the corporation. The second strategy represents the looting of the company and the destruction of its long-term prospects for growth and profitability. Divestiture of assets strips the company of weapons it can use in struggles with its competitors, while heavy borrowing increases corporate debt burdens, lowers liquidity, wastes financial resources that could be used for capital investment or research and development, and greatly increases corporate vulnerability to adverse economic conditions.

In the absence of hostile takeover attempts, managements refuse to pursue these stockholder-supported strategies; stockholders are relatively powerless to force their will on management. Changes in institutions and practices in the past decade have fundamentally altered this power relationship. When threatened with the loss of control of the firm through a hostile takeover, managers have been willing to defend their personal power through precisely those strategies they previously rejected because they were disastrous for the enterprise itself.

Thus, the stockholder-management "wars" of the 1980s demonstrate that the Tobin-Minsky-neoclassical assumption of owner-manager conflation is at odds with economic reality. However, they also suggest that institutional change in the past decade has given Keynes' domination thesis a degree of relevance it previously lacked.

One such change is that banks and brokerage houses are now willing to arrange tens of billions of dollars of financing for hostile takeovers, something they were unwilling to do in the 1970s. Equally important, money managers' increasingly short-term orientation has made firms that undertake major long-term investment projects extremely vulnerable to hostile raids. Corporations fear that if they incur the short-term costs inevitably associated with investment, money managers will dump their stock, its price will fall, and they will be easy targets for

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<sup>20</sup> The net decline in corporate equity outstanding between 1984 and 1987 is estimated to exceed \$300B. See *The New York Times* (October 15, 1987, F3).

corporate raiders.

What is being described here is a clear case of financial market domination. Under the specific institutional conditions of the period, those corporate managers vulnerable to hostile takeovers are forced against their better judgment to follow investment and financing strategies dictated by financial markets.

We conclude that the assumption that owners and managers are virtually identical economic agents must be rejected, and that the validity of the hypothesis that financial markets dictate (rather than merely influence) enterprise investment decisions changes with institutional conditions and historical circumstance.

#### **4. Conclusion**

Our central conclusion can be stated quite simply: in order to be able to explain adequately the dynamics of the capitalist economy, a macrotheory must root instability in both the real and financial sectors. Many Keynesian economists have made substantial contributions to our understanding of the nature and character of financial sources of instability. Marxists and other Keynesians have done stimulating and productive analytical work on sources of investment instability rooted in the real sector. What has yet to be accomplished and what is perhaps the most pressing task presently confronting macroeconomists is the development of a theoretical framework that can adequately incorporate both of these sets of contributions and model the complex and rapidly evolving structure of mutual interaction and codetermination between the real and financial sectors. To get the job done properly, many Marxists will have to take financial phenomena more seriously than they have traditionally done. And many Keynesians will have to end their flirtation with conflation and universal financial market domination and pay more attention to the theory of the semiautonomous managerial firm and the complex environment within which it operates.

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