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Entrepreneurship and Corporate Governance

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Abstract: This paper explores the relationship between the theory of the firm and the theory of financial markets. I begin with Mises's claim that the defining feature of an industrialized, market economy is the use of financial markets to allocate capital among firms and among industries. This presupposes a market for the ownership and control of productive assets. Unfortunately, the Austrian theory of capital markets is relatively undeveloped. Focusing on the financial-market entrepreneur, I outline some features of an Austrian theory of corporate governance and relate them to the internal organization of the firm. I begin by reviewing the traditional, production-function theory of the firm and suggesting two alternative perspectives: that of the entrepreneur and that of the capitalist. I next discuss the Coasian or "contractual" approach to the firm and argue that it provides a useful organizing framework for Austrian research on the firm. The subsequent section proposes entrepreneurship and economic calculation as building blocks for an Austrian theory of the firm. Finally, after a brief review of capital-market behavior and the disciplinary role of takeovers, I outline four areas for Austrian research in corporate governance: firms as investments, internal capital markets, comparative corporate governance, and financiers as entrepreneurs.

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Entrepreneurship and Corporate Governance

In his "closing salvo" in the socialist calculation debate, Mises (1949, pp. 705–10) argued that the market socialists failed to understand the role of financial markets in an industrial economy. Even with markets for consumer goods, he explained, socialism would fail because it substituted collective ownership of the means of production for private capital markets. Through these markets, owners of financial capital decide which firms, and which industries, receive resources to make consumer goods. In a modern economy, most production takes place in publicly held corporations. Of prime importance, then, is the problem of *corporate governance*: How do owners of financial capital structure their agreements with those who receive that capital, to prevent its misuse? Unfortunately, there exists little research in this area from an Austrian perspective.

In this paper I focus on the financial-market entrepreneur—what Rothbard (1962, 1985) calls the *capitalist-entrepreneur*—to outline some features of an Austrian theory of corporate governance. I begin by reviewing the traditional, production-function theory of the firm and suggesting two alternative perspectives: that of the entrepreneur and that of the capitalist. I next discuss the Coasian, or "contractual" approach to the firm and argue that it provides a useful organizing framework for Austrian research on the firm. The subsequent section proposes entrepreneurship and economic calculation as building blocks for an Austrian theory of the firm. Finally, after a brief review of capital-market behavior and the disciplinary role of takeovers, I outline four areas for Austrian research in corporate governance: firms as investments, internal capital markets, comparative corporate governance, and financiers as entrepreneurs.

1. The traditional theory of the firm

In economics textbooks, the "firm" is a production function or production possibilities set, a "black box" that transforms inputs into outputs. Given the existing state of technology, the prices of inputs, and a demand schedule, the firm maximizes money profits subject to the constraint that its production plans must be technologically feasible. The firm is modeled as a single actor, facing a series of uncomplicated decisions: what level of output to produce, how much of each

factor to hire, and the like. These "decisions," of course, are not really decisions at all; they are trivial mathematical calculations, implicit in the underlying data. In the long run, the firm may choose an optimal size and output mix, but even these are determined by the characteristics of the production function (economies of scale, scope, and sequence). In short: the firm is a set of cost curves, and the "theory of the firm" is a calculus problem.

While descriptively vacuous, the production-function approach has the appeal of analytical tractability along with its elegant parallel to neoclassical consumer theory (profit maximization is like utility maximization, isoquants are indifference curves, and so on). Nonetheless, many economists now see it as increasingly unsatisfactory, as unable to account for a variety of real-world business practices: vertical and lateral integration, mergers, geographic and product-line diversification, franchising, long-term commercial contracting, transfer pricing, research joint ventures, and many others. The inadequacy of the traditional theory of the firm explains much of the recent interest in agency theory, transaction cost economics, the capabilities approach, and other facets of the "new institutional economics."¹

A more serious problem with the traditional theory, however, has received less attention. The theory of profit maximization is nearly always told from the perspective of the *manager*, the agent who operates the plant, not that of the *owner*, who supplies the capital to fund the plant. Yet owners control how much authority to delegate to operational managers, so capitalists are the ultimate decision makers. To understand the firm, then, we must focus on the actions and plans of the suppliers of financial capital.

Focusing on capital markets and the corporate governance problem highlights a fundamental analytical problem with the traditional approach to the theory of the firm. In the production-function approach, money capital is treated as a factor of production. The manager's objective is to maximize the difference between total revenues and total costs, with the cost of capital treated simply as another cost (and typically assumed to be exogenous). The residual, "profit," is retained by the manager. Hence financial capital receives scant attention. As discussed below, this can be a serious flaw.

¹ For recent surveys of this literature see Furubotn and Richter, 1997, and Klein, 1998a.

2. Two alternative perspectives

What, then, is the proper way to understand the business firm? Two alternative perspectives deserve consideration. The first perspective, which has received substantial attention in the Austrian literature, is that of the entrepreneur, or what Mises (1949, pp. 254–55) calls the "entrepreneur–promoter." Entrepreneurship, in the Misesian sense, is the act of bearing uncertainty. Production unfolds through time, and thus the entrepreneur must purchase factors of production in the present (paying today's prices, which are known), in anticipation of revenues from the future sale of the product (at tomorrow's prices, which are uncertain). Entrepreneurial profit or loss is the difference between these revenues and the initial outlays, less the general rate of interest. As such, profit is the reward for successfully bearing uncertainty. Successful promoters make accurate forecasts of future prices and receive returns greater than their outlays. Those whose forecasts are less accurate earn losses. Promoters who systematically make poor forecasts quickly find themselves unable to secure any further resources for investment and eventually exit the market.

The second perspective is that of the capitalist, the owner of the firm. Ownership can also be thought of as a factor of production—what Rothbard (1962, pp. 538–41) calls the "decision-making factor"—but it is different from the other factors. In an ownership approach, money capital is treated as a unique factor of production, the "controlling factor"; the investor is both ultimate decision maker and residual claimant. The firm's objective is to maximize the return on the owner's investment. Because the owner delegates certain functions to managers, a central focus of the theory of the firm becomes the problem of corporate governance: How do suppliers of capital structure their arrangements with managers in a way that maximizes their returns?

This paper argues that the most interesting problems in the theory of the firm relate to the intersection between the entrepreneurial function and the capitalist function. Indeed, as Mises argued, the driving force behind the market economy is a particular type of entrepreneur, the capitalist–entrepreneur, who risks his money capital in anticipation of future, uncertain, returns. Moreover, as discussed below, the entrepreneur is nearly always also a capitalist, and the capitalist is also an entrepreneur.

Economists now increasingly recognize the importance of the capitalist in the direction of the firm's affairs. In the introduction to his influential book *Strong Managers, Weak Owners*, Mark Roe (1994, p. vii) makes the point succinctly:

Economic theory once treated the firm as a collection of machinery, technology, inventory, workers, and capital. Dump these inputs into a black box, stir them up, and one got outputs of products and profits. Today, theory sees the firm as more, as a management structure. The firm succeeds if managers can successfully coordinate the firm's activities; it fails if managers cannot effectively coordinate and match people and inputs to current technologies and markets. At the very top of the firm are the relationships among the firm's shareholders, its directors, and its senior managers. If those relationships are dysfunctional, the firm is more likely to stumble.

As Roe suggests, the relationships between the firm's owners (shareholders) and its top managers are centrally important in determining firm performance.²

3. The contractual approach

Both the entrepreneurial perspective and the ownership perspective can be understood from within the "contractual" framework associated with Coase (1937). Coase was the first to explain that the boundaries of the organization depend not only on the productive technology, but on the costs of transacting business. In the Coasian framework, as developed and expanded by Williamson (1975, 1985, 1996), Klein, Crawford, and Alchian (1978), Grossman and Hart (1986), Hart and Moore (1990), and others, the decision to organize transactions within the firm as opposed to on the open market—the "make or buy decision"—depends on the relative costs of internal versus external exchange. The market mechanism entails certain costs: discovering the relevant prices, negotiating and enforcing contracts, and so on. Within the firm, the entrepreneur may be able to reduce these "transaction costs" by coordinating these activities himself. However, internal organization brings other kinds of transaction costs, namely problems of information flow, incentives, monitoring, and performance evaluation. The boundary of the firm, then, is determined by

² For recent surveys of the literature on corporate governance see Gilson, 1995; Shleifer and Vishny, 1997; and Zingales, 1997.

the tradeoff, at the margin, between the relative transaction costs of external and internal exchange. In this sense, firm boundaries depend not only on technology, but on organizational considerations; that is, on the costs and benefits of various contracting alternatives.

Economic organization, both internal and external, imposes costs because complex contracts are usually *incomplete*. The transaction-cost literature makes much of the distinction between complete and incomplete contracts. A complete contract specifies a course of action, a decision, or terms of trade contingent on every possible future state of affairs. In textbook models of competitive general equilibrium, all contracts are assumed to be complete. The future is not known with certainty, but the probability distributions of all possible future events are known.³ In an important sense, the model is "timeless": all relevant future contingencies are considered in the ex ante contracting stage, so there are no decisions to be made as the future unfolds.

The Coasian approach relaxes this assumption and holds that complete, contingent contracts are not always feasible. In a world of "true" (structural, rather than parametric) uncertainty, the future holds genuine surprises (Foss, 1993a), and this limits the available contracting options. In simple transactions—for instance, procurement of an off-the-shelf component—uncertainty may be relatively unimportant, and spot-market contracting works well. For more complex transactions, such as the purchase and installation of specialized equipment, the underlying agreements will typically be incomplete—the contract will provide remedies for only some possible future contingencies.⁴ One example is a *relational contract*, an agreement that describes shared goals and a set of general principles that govern the relationship (Goldberg, 1980). Another is an *implicit contract*—an agreement that while unstated, is presumably understood by all sides.⁵ Regardless, contractual incompleteness exposes the contracting parties to certain risks. In particular, investment in relationship-specific assets exposes agents to a potential "holdup" problem: If

³ What Knight (1921) would describe as "risk," rather than "uncertainty."

⁴ Williamson attributes contractual incompleteness to cognitive limits or "bounded rationality," following Simon's (1961, p. xxiv) interpretation of human action as "intendedly rational, but only limitedly so." Other TCE economists are more agnostic, assuming only that some quantities or outcomes are unobservable (or not verifiable to third parties, such as the courts), in which case contracts cannot be made contingent on these variables or outcomes.

⁵ This is the sense in which Kreps (1990) understands "corporate culture."

circumstances change, their trading partners may try to expropriate the rents accruing to the specific assets. Suppose an upstream supplier tailors its equipment to service a particular customer. After the equipment is in place, the customer may demand a lower price, knowing that the salvage value of the specialized equipment is lower than the net payment it offers. Anticipating this possibility, the supplier will be unwilling to install the custom machinery without protection for such a contingency, even if the specialized technology would make the relationship more profitable for both sides.

One way to safeguard rents accruing to specific assets is vertical (or lateral) integration, where a merger eliminates any adversarial interests. Less extreme options include long-term contracts (Joskow, 1985, 1987, 1988, 1990), partial ownership agreements (Pisano, Russo, and Teece, 1988; Pisano, 1990), or agreements for both parties to invest in offsetting relationship-specific investments (Heide and John, 1988). Overall, parties may employ several governance structures. The Coasian literature tries to match the appropriate governance structure with the particular characteristics of the transaction.

There is some debate within the Austrian literature about whether the basic Coasian approach is compatible with Austrian economics. O'Driscoll and Rizzo (1985, p. 124) while acknowledging Coase's approach as an "excellent static conceptualization of the problem," argue that a more evolutionary framework is needed to understand how firms respond to change. Some Austrian economists have suggested that the Coasian framework may be too narrow, too squarely in the general-equilibrium tradition to deal adequately with Austrian concerns (Boudreaux and Holcombe, 1989; Langlois, 1994). However, as Foss (1993b) has pointed out, there are "two Coasian traditions." One tradition, the moral-hazard or agency-theoretic branch associated with Alchian and Demsetz (1972), studies the design of ex-ante mechanisms to limit shirking when supervision is costly. Here the emphasis is on monitoring and incentives in an (exogenously determined) agency relationship. The above criticisms may apply to this branch of the modern literature, but they do not apply to the other tradition, the governance or asset-specificity branch, especially in Williamson's more heterodox formulation. Williamson's transaction cost framework incorporates non-maximizing behavior (bounded rationality); true, "structural" uncertainty or genuine surprise (complete contracts are held not to be feasible, meaning that all ex-post

contingencies cannot be contracted upon *ex ante*); and process or adaptation over time (trading relationships develop over time, typically undergoing a "fundamental transformation" that changes the terms of trade). In short, "at least some modern theories of the firm do not at all presuppose the 'closed' economic universe—with all relevant inputs and outputs being given, human action conceptualized as maximization, etc.—that [some critics] claim are underneath the contemporary theory of the firm" (Foss, 1993a, p. 274). Stated differently, one can adopt an essentially Coasian perspective without abandoning the Knightian or Austrian view of the entrepreneur as an uncertainty-bearing, innovating decision maker.⁶

4. Building blocks of an Austrian theory of the firm

Beginning with the basic Coasian or contractual framework, we can add two elements as building blocks to an Austrian theory of the firm: entrepreneurship and economic calculation. Entrepreneurship represents the bearing of uncertainty. Economic calculation is the tool entrepreneurs use to assess costs and expected future benefits. Consider each in turn.

4.1. Entrepreneurship

Entrepreneurship, in the Misesian sense, is the act of bearing uncertainty. In an ever-changing world, decisions must be made based on expectations of future events. Because production takes time, resources must be invested before the returns on those investments are realized. If the forecast of future returns is inaccurate, the expected profits will turn out to be losses. This is of course true not only of financial investors, but all human actors. If the future were known with certainty, man would not act, since his action would not change the future. Thus all purposeful human action carries some risk that the means chosen will not bring about the desired end. In this sense, all human actors are entrepreneurs.

Austrians tend to focus on this kind of pure entrepreneurship, the entrepreneurial aspect of all human behavior. In doing so, however, they often overlook a particular case of entrepreneurship, the driving force behind the structure of production: the capitalist-entrepreneur, who risks his

⁶ Foss and Foss (1998) argue, more generally, that contractual and "knowledge-based" theories of the firm are fundamentally complements, not rivals.

money capital in anticipation of future events. Kirzner's (1973, 1979) influential interpretation of Mises identifies "alertness" or "discovery," rather than uncertainty bearing, as the defining property of entrepreneurship. In Kirzner's framework, entrepreneurial profit is the reward to superior alertness to profit opportunities. The simplest case is that of the arbitrageur, who discovers a discrepancy in present prices that can be exploited for financial gain. In a more typical case, the entrepreneur is alert to a new product or a superior production process and steps in to fill this market gap before others.

Kirzner's formulation has been criticized, however, for a lack of attention to uncertainty. According to this criticism, mere alertness to a profit opportunity is not sufficient for earning profits. To reap financial gain, the entrepreneur must invest resources to realize the discovered profit opportunity. "Entrepreneurial ideas without money are mere parlor games until the money is obtained and committed to the projects" (Rothbard, 1985, p. 283). Moreover, excepting the few cases where buying low and selling high are nearly instantaneous (say, electronic trading of currencies or commodity futures), even arbitrage transactions require some time to complete. The selling price may fall before the arbitrageur has made his sale, and thus even the pure arbitrageur faces some probability of loss. In Kirzner's formulation, the worst that can happen to an entrepreneur is the failure to discover an existing profit opportunity. Entrepreneurs either earn profits or break even, but it is unclear how they suffer losses.

Kirzner (1997, p. 72) argues, more recently, that entrepreneurs can earn losses when they misread market conditions. "[E]ntrepreneurial boldness and imagination can lead to pure entrepreneurial losses as well as to pure profit. Mistaken actions by entrepreneurs mean that they have misread the market, possibly pushing price and output constellations in directions not equilibrative." But even this formulation makes it clear that it is mistaken *actions*—not mistaken *discoveries*—that leads to loss. Misreading market conditions leads to losses only if the entrepreneur has invested resources in a project based on this misreading. It is the failure to anticipate future market conditions correctly that causes the loss. It seems obscure to describe this as erroneous discovery, rather than unsuccessful uncertainty bearing.⁷

⁷ In his defense, it should be noted that Kirzner's (1997) remarks appear in the context of defending the equilibrating tendency of markets, against the Walrasian picture of instantaneous market adjustment. Still, the defense could perhaps be made equally well without reference to the discovery metaphor.

Mises, by contrast, consistently identifies entrepreneurship with both profit and loss. "There is a simple rule of thumb to tell entrepreneurs from non-entrepreneurs. The entrepreneurs are those on whom the incidence of losses on the capital employed falls" (Mises, 1951, p. 112). Moreover, while Mises indeed acknowledges the element of entrepreneurship in all human action, it is clear that the potential losses of the capitalist-entrepreneurs are particularly important:

Mises applies the concept of the entrepreneur to all cases of uncertainty-bearing, and since laborers face uncertainty in deciding where to move or what occupation to go into, laborers are also entrepreneurs. But the most important case of entrepreneurship, the driving force in shaping the actual structure and patterns of production in the market economy, are the capitalist-entrepreneurs, the ones who commit and risk their capital in deciding when, what, and how much to produce. The capitalists, too, are far more subject to actual monetary losses than are the laborers (Rothbard, 1985, p 282).⁸

Mises is careful to distinguish entrepreneurship from *management*, the carrying out of those tasks specified by the capitalist-entrepreneur. "[T]hose who confuse entrepreneurship and management close their eyes to the economic problem" (Mises, 1949, p. 708). It is the capitalist-entrepreneurs who control the allocation of capital to the various branches of industry.

It is clear from this formulation that the capitalist-entrepreneur must own property. He cannot invest without prior ownership of financial capital. Menger's (1871, pp. 159-61) treatment of production includes as entrepreneurial functions economic calculation, the "act of will," and "supervision of the execution of the production plan." These functions "entail property ownership and, therefore, mark the Mengerian entrepreneur as a capitalist-entrepreneur" (Salerno, 1998, p. 30). Menger describes "command of the services of capital" as a "necessary prerequisite" for economic activity. Even in large firms, although he may employ "several helpers," the entrepreneur himself continues to bear uncertainty, perform economic calculation, and supervise production, even if these functions "are ultimately confined . . . to determining the allocation of portions of wealth to particular productive purposes only by general categories, and

⁸ It should be noted that bondholders, as well as equity holders, are partly entrepreneurs, since even bondholders bear some default risk.

to selection and control of persons" (Menger, 1871, pp. 160–61; quoted in Salerno, 1998, p. 30).⁹ An Austrian theory of the firm, then, is essentially a theory about the ownership and use of capital. As Yu (1998, p. 7) puts it, "the Austrian firm is a collection of capital resources."

Unfortunately, the Austrian literature on the firm often confuses entrepreneurship with innovation, strategic planning, leadership, and other functions more properly associated with management than ownership. Witt (1998a, 1998b), for example, describes entrepreneurship as a form of "cognitive leadership." Witt (1998b) outlines a potential Austrian theory of the firm by combining recent literature on cognitive psychology with Kirzner's concept of entrepreneurship. Entrepreneurs require complementary factors of production, he argues, which are coordinated within the firm. For the firm to be successful, the entrepreneur must establish a tacit, shared framework of goals—what the management literature terms "leadership." A proper Austrian theory of the firm, then, must take account of the ways in which entrepreneurs communicate their business conceptions within the organization.

The problem with this argument is that while organizational leadership is undoubtedly important, it is not particularly "entrepreneurial." Entrepreneurship has little necessarily to do with having a business plan, communicating a "corporate culture," or other dimensions of business leadership; these are attributes of the successful *manager*, who may or may not be an entrepreneur.¹⁰ Moreover, even if top-level managerial skill were the same as entrepreneurship, it is unclear why "cognitive leadership"—tacit communication of shared modes of thought, core capabilities, and the like—should be more "entrepreneurial" than other, comparatively mundane managerial tasks such as structuring incentives, limiting opportunism, administering rewards, and so on.

⁹ For more on Misesian entrepreneurship and its various interpretations see also Salerno, 1993, pp. 116–33, and Kirzner, 1996.

¹⁰ One distinction between entrepreneurship (as uncertainty bearing) and management is that managerial functions can be purchased on the market: innovation can be outsourced to R&D labs; strategic planning can be contracted out to consultants; corporate identities, both internal and external, can be developed and communicated by outside specialists; and so on.

4.2. *Economic calculation*

All entrepreneurs, particularly capitalist-entrepreneurs, use economic calculation as their primary decision-making tool. By economic calculation we simply mean the use of present prices and anticipated future prices to compare present costs with expected future benefits. In this way the entrepreneur decides what goods and services should be produced, and what methods of production should be used to produce them. "The business of the entrepreneur is not merely to experiment with new technological methods, but to select from the multitude of technologically feasible methods those which are best fit to supply the public in the cheapest way with the things they are asking for most urgently" (Mises, 1951, p. 110). To make this selection, the entrepreneur must be able to weigh the costs and expected benefits of various courses of action.

The need for economic calculation places ultimate limits on the size of the organization (Klein, 1996). Indeed, many writers have recognized the connections between the socialist calculation debate and the problems of internal organization (Montias, 1976; Williamson, 1991). Kirzner (1992, p. 162), for example, interprets the costs of internal organization in terms of Hayek's knowledge problem: "In a free market, any advantages that may be derived from 'central planning' . . . are purchased at the price of an enhanced knowledge problem. We may expect firms to spontaneously expand to the point where additional advantages of 'central' planning are just offset by the incremental knowledge difficulties that stem from dispersed information."

What, precisely, drives this knowledge problem? The mainstream literature on the firm focuses mostly on the costs of market exchange, and much less on the costs of governing internal exchange. The new research has yet to produce a fully satisfactory explanation of the limits to firm size (Williamson, 1985, chapter 6). In Coase's words, "Why does the entrepreneur not organize one less transaction or one more?" Or, more generally, "Why is not all production carried on in one big firm?" (Coase, 1937, pp. 42-43). Existing contractual explanations rely on problems of authority and responsibility (Arrow, 1974); incentive distortions caused by residual ownership rights (Grossman and Hart, 1986; Holmström and Tirole, 1989; Hart and Moore, 1990); and the costs of attempting to reproduce market governance features within the firm (Williamson, 1985, chapter 6). Rothbard (1962, pp. 544-50) offered an explanation for the firm's vertical boundaries based on Mises's claim that economic calculation under socialism is impossi-

ble. Rothbard argued that the need for monetary calculation in terms of actual prices not only explains the failures of central planning under socialism, but places an upper bound on firm size.

Rothbard's account begins with the recognition that Mises's position on socialist economic calculation is not exclusively, or even primarily, about socialism. It is about the role of prices for capital goods. Entrepreneurs allocate resources based on their expectations about future prices, and the information contained in present prices. To make profits, they need information about all prices, not only the prices of consumer goods but the prices of factors of production. Without markets for capital goods, these goods can have no prices, and hence entrepreneurs cannot make judgments about the relative scarcities of these factors. In any environment, then—socialist or not—where a factor of production has no market price, a potential user of that factor will be unable to make rational decisions about its use. Stated this way, Mises's claim is simply that efficient resource allocation in a market economy requires well-functioning asset markets. To have such markets, factors of production must be privately owned.

Rothbard's contribution was to generalize Mises's analysis of this problem under socialism to the context of vertical integration and the size of the organization. Rothbard writes in *Man, Economy, and State* that up to a point, the size of the firm is determined by costs, as in the textbook model. However, "the ultimate limits are set on the relative size of the firm by the necessity for *markets* to exist in every factor, in order to make it possible for the firm to calculate its profits and losses" (Rothbard, 1962, p. 536). This argument hinges on the notion of "implicit costs." The market value of opportunity costs for factor services—what Rothbard calls "estimates of implicit incomes"—can be determined only if there are external markets for those factors (pp. 542–44). For example, if an entrepreneur hires himself to manage the business, the opportunity cost of his labor must be included in the firm's costs. Yet without an actual market for the entrepreneur's managerial services, he will be unable to figure out his opportunity cost; his balance sheets will therefore be less accurate than they would if he could measure his opportunity cost.

The same problem affects a firm owning multiple stages of production. A large, integrated firm is typically organized into semi-autonomous profit centers, each specializing in a particular final or intermediate product. The central management of the firm uses the implicit incomes of the business units, as reflected in statements of divisional profit and loss, to allocate physical and

financial capital across the divisions. To compute divisional profits and losses, the firm needs an economically meaningful transfer price for all internally transferred goods and services. If there is an external market for the component, the firm can use that market price as the transfer price. Without a market price, however, the transfer price must be estimated, either on a cost-plus basis or by bargaining between the buying and selling divisions (Gabor, 1984; Eccles and White, 1988; King, 1994). Such estimated transfer prices contain less information than actual market prices.

The use of internally traded intermediate goods for which no external market reference is available thus introduces distortions that reduce organizational efficiency. This gives us the element missing from contemporary theories of economic organization, an upper bound: the firm is constrained by the need for external markets for all internally traded goods. In other words, no firm can become so large that it is both the unique producer and user of an intermediate product; for then no market-based transfer prices will be available, and the firm will be unable to calculate divisional profit and loss and therefore unable to allocate resources correctly between divisions.¹¹ Of course, internal organization does avoid the holdup problem, which the firm would face if there were a unique outside supplier; conceivably, this benefit could outweigh the increase in "incalculability" (Rothbard, 1962, p. 548). Usually, however, the costs from the loss of calculation will likely exceed the costs of external governance.¹²

Like Kirzner (1992), Rothbard viewed his contribution as consistent with the basic Coasian framework. In a later elaboration of this argument (Rothbard, 1976, p. 76), he states that his own treatment of the limits of the firm

¹¹ Note that in general, Rothbard is making a claim only about the upper bound of the firm, not the incremental cost of expanding the firm's activities (as long as external market references are available). As soon as the firm expands to the point where at least one external market has disappeared, however, the calculation problem exists. The difficulties become worse as more and more external markets disappear, as "islands of noncalculable chaos swell to the proportions of masses and continents. As the area of incalculability increases, the degrees of irrationality, misallocation, loss, impoverishment, etc., become greater" (Rothbard, 1962, p. 548).

¹² Similarly, Rothbard's claim is not that because external prices are necessary for large firms to function efficiently, firms will tend to become large where external markets are "thick" or better developed. On the contrary, large firms typically arise precisely where external markets are poorly developed or hampered by government intervention; these are the kinds of circumstances that give entrepreneurs an advantage in coordinating activities internally (Chandler, 1977). However, such firms are still constrained by the need for *some* external market reference.

serves to extend the notable analysis of Professor Coase on the market determinants of the size of the firm, or the relative extent of corporate planning within the firm as against the use of exchange and the price mechanism. Coase pointed out that there are diminishing benefits and increasing costs to each of these two alternatives, resulting, as he put it, in an "'optimum' amount of planning" in the free market system. Our thesis adds that the costs of internal corporate planning become prohibitive as soon as markets for capital goods begin to disappear, so that the free-market optimum will always stop well short not only of One Big Firm throughout the world market but also of *any* disappearance of specific markets and hence of economic calculation in that product or resource (Rothbard, 1976, p. 76).

"Central planning" within the firm, then, is possible only when the firm exists within a larger market setting.¹³

Rothbard's argument about the limits to firm size has several implications for research in industrial organization and business strategy. First, all else equal, firms able to use market-based transfer prices should eventually outperform firms using administered or negotiated transfer prices. Second, innovation should be particularly difficult in industries where few of the relevant manufacturing capabilities exist in the market (Langlois and Robertson, 1995). Because innovating firms are more likely to be using unique intermediate goods and production processes, innovation carries with its benefits the cost of more severe internal distortions. Economic calculation is then another obstacle the innovator must overcome. Third, the allocation of overhead or fixed cost across divisions provides will be particularly problematic. If an input is essentially indivisible (or nonexcludable), then there is no way to compute the opportunity cost of just the portion of the input used by a particular division (see Rogerson, 1992, for a discussion of these

¹³ Ironically, the only reason the Soviet Union and the communist nations of Eastern Europe could exist at all is that they never fully succeeded in establishing socialism worldwide, so they could use world market prices to establish implicit prices for the goods they bought and sold internally (Rothbard, 1991, pp. 73–74). As Mises (1949, pp. 702–03) observes, "[w]ithout the aid of [world] prices their actions would have been aimless and planless. Only because they were able to refer to these foreign prices were they able to calculate, to keep books, and to prepare their much talked about plans." Indeed, traditional command-style economies, such as that of the former U.S.S.R., appear to be able only to mimic those tasks that market economies have performed before; they are unable to set up and execute original tasks (Ericson, 1991, p. 21).

problems).¹⁴ Firms with high overhead costs should thus be at a disadvantage relative to firms able to allocate costs more precisely between business units. In the literature on cost accounting there has been some recent interest in "market simulation accounting" (Staubus, 1986), by which firms try to assess the price at which an asset would trade in an active market, based on observed market prices and related information. Rothbard's position on the limits to firm size suggests that the market simulation approach may prove a useful accounting technique.

5. Capital markets

If the capitalist-entrepreneur is the driving force behind the industrialized, market economy, then economists should focus their attention on the financial markets, the capitalist-entrepreneur's main venue. Here is where this most important form of entrepreneurship takes place. Of course, in the traditional, production-function theory of the firm, capital markets do little but supply financial capital to managers, who can get as much capital as they wish at the going market price. In a more sophisticated understanding, managers do not decide how much capital they want; capitalists decide where capital should be allocated. In doing so, they provide essential discipline to the plant-level manager, who Mises (1949, p. 304) calls the entrepreneur's "junior partner."

When capitalists supply resources to firms, they usually delegate to managers the day-to-day responsibility for use of those resources. Managers may thus be able to use those resources to benefit themselves, rather than the capitalist. The problem of managerial discretion—what we now call the principal-agent problem—occupies much current research in the theory of the firm. Under what conditions can managers exercise discretionary behavior? What kinds of rules, or mechanisms, can be designed to align the manager's interest with the owner's? Without effective rules, what actions will managers choose? An early application was the proposed "separation of ownership and control" in the modern corporation. Berle and Means (1932) argued that the modern firm is run not by its owners, the shareholders, but by salaried managers, whose interests are different from those of shareholders and include executive perks, prestige, and similar re-

¹⁴ Mises (1944, p. 32) recognized the problem of allocating overhead costs, mentioning this as a possible exception to the notion that divisional accounting costs can reflect "true" costs.

wards. If the corporation is diffusely held, no individual shareholder has sufficient motivation to engage in (costly) monitoring managerial decisions, and therefore discretion will flourish at the expense of the market value of the firm. However, Berle and Means did not consider how owners might limit this discretion *ex ante*, without the need for detailed *ex post* monitoring.

Agency theory—now the standard language of corporate finance—addresses these problems. As developed by Jensen and Meckling (1976), Fama (1980), Fama and Jensen (1983), and Jensen (1986), agency theory studies the design of *ex-ante* incentive-compatible mechanisms to reduce agency costs in the face of potential moral hazard (malfeasance) by agents. Agency costs are defined by Jensen and Meckling (1976, p. 308) as the sum of "(1) the monitoring expenditures of the principal, (2) the bonding expenditures by the agent, and (3) the residual loss." The residual loss represents the potential gains from trade that fail to be realized because perfect incentives for agents cannot be provided when the agent's actions are unobservable. In a typical agency model, a principal assigns an agent to do some task (producing output, for instance), but has only an imperfect signal of the agent's performance (for example, effort). The agency problem is analogous to the signal-extraction problem popularized in macroeconomics by Lucas (1972): how much of the observable outcome is due to the agent's effort, and how much is due to factors beyond the agent's control? The optimal incentive contract balances the principal's desire to provide incentives to increase the agent's effort (for example, by basing compensation on the outcome) with the agent's desire to be insured from the fluctuations in compensation that come from these random factors.

Owners of corporations (shareholders) use a variety of control or governance mechanisms to limit the managerial discretion described by Berle and Means. Both "internal" and "external" governance may be employed. Internally, owners may establish a board of directors to oversee the actions of managers. They can use performance-based compensation to motivate managers to act in the owners' interest (for instance, giving managers stock options instead of cash bonuses). They can adopt a particular organizational form, such as the "M-form" structure, in which managerial discretion is more easily kept in check (Williamson, 1975). Finally, they can rely on competition within the firm for top-level management positions—what Fama (1980) calls the internal market for managers—to limit the discretionary behavior of top-level management.

Even more important are external forces that help align managers' interests with those of shareholders. Competition in the product market, for example, assures that firms whose managers engage in too much discretionary behavior will fail, costing the managers their jobs. In countries where universal banking is permitted, large equity holders such as banks can exercise considerable influence over managerial behavior. The external governance mechanism that has received the most attention, however, is the market for ownership itself, the "market for corporate control."

Henry Manne's essay, "Mergers and the Market for Corporate Control" (1965), responded to Berle and Means by noting that managerial discretion will be limited if there is an active market for control of corporations. When managers engage in discretionary behavior, the share price of the firm falls, and this invites takeover and subsequent replacement of incumbent management. Therefore while managers may hold considerable autonomy over the day-to-day operations of the firm, the stock market places strict limits on their behavior.

Mises makes the same general point in the passage in *Human Action* (1949) distinguishing what Mises calls "profit management" from "bureaucratic management" (pp. 308–11). It is true, Mises acknowledges, that the salaried managers of a corporation hold considerable autonomy over the day-to-day operations of the firm. Nonetheless, the shareholders make the ultimate decisions about allocating resources to the firm, in their decisions to buy and sell stock:

[The Berle–Means] doctrine disregards entirely the role that the capital and money market, the stock and bond exchange, which a pertinent idiom simply calls the "market," plays in the direction of corporate business. . . . [T]he changes in the prices of common and preferred stock and of corporate bonds are the means applied by the capitalists for the supreme control of the flow of capital. The price structure as determined by the speculations on the capital and money markets and on the big commodity exchanges not only decides how much capital is available for the conduct of each corporation's business; it creates a state of affairs to which the managers must adjust their operations in detail (p. 303).

Mises does not identify the takeover mechanism per se as a means for capitalists to exercise control—takeovers were much less popular before the late 1950s, when the tender offer began to replace the proxy contest as the acquisition method of choice—but the main point is clear: The

true basis of the market system is not the product market, the labor market, or the managerial market, but the capital market, where entrepreneurial judgments are exercised and decisions carried out.¹⁵

Mises's treatment of the importance of financial markets is also the key to his final rebuttal in *Human Action* to Lange, Lerner, and the other market-socialist critics of his calculation argument (Mises, 1949, pp. 698–715). The market socialists, he argued, fail to understand that the main task performed by a market system is not the pricing of consumer goods, but the allocation of financial capital among the various branches of industry. By focusing on production and pricing decisions within a *given* structure of capital, the socialists ignore the vital role of capital markets.

6. Toward an Austrian theory of corporate governance

Given that financial-market entrepreneurship is the defining feature of a market economy, that economic calculation is the capitalist-entrepreneur's primary tool, and that economic calculation requires well-functioning capital markets, what can capitalist-entrepreneurs do to govern their relationships with operational managers? What should be the basis of an Austrian theory of corporate governance? This section suggests four areas that Austrians should address: the concept of the firm as an investment; the relationship between internal and external capital markets; comparative corporate governance; and financiers as entrepreneurs. Consider each in turn.

6.1. Firms as investments

Because the owner, and not the manager, is the ultimate decision maker, the Austrian theory of the firm should comprise two elements: a theory of investment (corporate finance), and a theory of how investors provide incentives for managers to use these resources efficiently (corporate governance). In microeconomics textbooks, by contrast, the capital investors give to the firm is treated as just another factor of production. Its price, the "rental price of capital" or interest, is

¹⁵ Compare Rothbard, 1962, p. 538: "Hired managers may successfully direct production or choose production processes. But the ultimate responsibility and control of production rests inevitably with the *owner*, with the businessman whose property the product is until it is sold. It is the owners who make the decision concerning how much capital to invest and in what particular processes. And particularly, it is the *owners* who must choose the managers. The ultimate decisions concerning the use of their property and the choice of the men to manage it must therefore be made by the owners and by no one else."

simply another cost to the producer. Any excess of revenues over costs, including the cost of capital, goes to the manager (sometimes confusingly called the "entrepreneur"). This residual is called "profit," though it is not profit in the Misesian sense.

In the ownership perspective, as developed by Gabor and Pearce (1952, 1958), Vickers (1970), Moroney (1972), and others, the firm is viewed as an *investment*. The firm's goal is to maximize the return on invested capital. This money capital may be regarded as a factor of production, but it is a unique factor, the "controlling" factor that receives the net proceeds of the operation. Other factors, such as labor (including management) and physical capital, are regarded as "contracting" factors that receive a fixed payment. The services of the top-level manager are thus treated as a cost, while the investor is considered the residual claimant. Also note that because the capitalist bears the risk that the investment will fail, upon investing the capitalist has become an entrepreneur. Furthermore, to the extent that the entrepreneur (as Kirznerian discoverer) hires himself out to the capitalist as a salaried manager, his compensation is not entrepreneurial profit; it is a cost to the owner of the firm (Rothbard, 1985, p. 283).

This has significant implications for firm behavior. First, the firm will not always expand output to the point where marginal revenue equals marginal cost. For if the firm is earning positive net returns at its current level of output, instead of increasing output until marginal net returns fall to zero, the firm could simply take those returns and employ them elsewhere, either to set up a new firm in the same industry or to diversify into a new industry (Gabor and Pearce, 1952, p. 253). The efficient scale of production is determined by outside investment opportunities, not simply the marginal returns from producing a single output.

Indeed, it is easy to show that under fairly weak assumptions, the output level that maximizes the profit *rate* is less than the output level that maximizes the *level* of profit. Consider a standard, concave profit function; add a "money capital requirement," the amount of capital required to finance a given level of output. As long as the money capital requirement is increasing in output, the output level that maximizes the profit rate—profit divided by the money capital required to finance that output level—is less than the output level that maximizes profit. From the capitalist's perspective, output should be expanded to the point where the return on the last dollar of money capital is just equal to the opportunity cost of that last dollar of money capital. But as long as the

plant manager is not free to invest his financial capital elsewhere, the manager's cost curves do not reflect this opportunity cost. Hence the manager chooses a higher output level than that which maximizes the capitalist's return.

Significantly, for internal accounting purposes, firms are typically structured such that the goal of any operating unit is to maximize the return on its invested capital. In fact, not only do firms set up divisions as profit centers, as discussed above, but groups of profit centers are frequently grouped together as "investment centers" within the firm itself. Reece and Cool (1978) studied 620 of the largest U.S. firms in 1978 and found that 74 percent had investment centers. These subunits are commonly evaluated according to a return-on-investment (ROI) criterion, such as the ratio of accounting net income generated by the investment center divided by total assets invested in the investment center. More recently, measures such as residual income and "economic value added" (EVA) has become popular as an alternative to ROI (Stern, Stewart, and Chew, 1995). The point is that individual divisions are being evaluated on the same basis as the corporation itself—namely, what kind of return is being generated on the financial resources invested.

Second, the firm-as-investment concept relates closely to an emerging literature on merger as a form of firm-level investment (Bittlingmayer, 1996; Andrade and Stafford, 1997). Once managers have acquired financial resources from capitalists, these managers have some discretion over how to invest those resources. To supplement the "normal" forms of firm-level investment—capital expenditures and R&D—managers may choose to purchase assets of existing firms through merger. Merger may be a different form of investment; Andrade and Stafford (1997) find, for example, that mergers in particular industries tend to be clustered over time, while rankings of non-merger forms of investment by industry tend to remain constant. This suggests that merger activity is encouraged by specific industry or policy shocks, like deregulation, the emergence of junk-bond financing, and increased foreign competition (Mitchell and Mulherin, 1996). Nonetheless, mergers will be evaluated by the returns they generate, just like any other investment.

6.2 Internal capital markets

In his extension of the Coasian framework, Williamson (1975, 1981) describes the modern multidivisional or "M-form" corporation as a means of intra-firm capital allocation. Capital markets allocate resources between standalone, single-product firms. In the diversified, multidivisional firm, by contrast, resources are allocated internally, as the entrepreneur distributes funds among profit-center divisions. This "internal capital market" replicates the allocative and disciplinary roles of the financial markets, shifting resources toward more profitable lines of production.¹⁶ Coase claimed that firms "supplant" markets when the transaction costs of market exchange exceed those of internal production. Williamson adds that diversified, multidivisional firms "supplant" capital markets when the costs of external finance exceed those of internal resource allocation.

According to the internal capital markets theory, diversified firms arise when limits in the capital market permit internal management to allocate and manage funds more efficiently than the external capital market. These efficiencies may come from several sources. First, the central headquarters of the firm (HQ) typically has access to information unavailable to external parties, which it extracts through its own internal auditing and reporting procedures (Williamson, 1975, pp. 145–47).¹⁷ Second, managers inside the firm may also be more willing to reveal information to HQ than to outsiders, since revealing the same information to the capital market would also reveal it to rival firms, potentially hurting the firm's competitive position. Third, HQ can also intervene selectively, making marginal changes to divisional operating procedures, whereas the external market can discipline a division only by raising or lowering the share price of the entire firm. Fourth, HQ has residual rights of control that providers of outside finance do not have,

¹⁶ Such a process is described explicitly in the 1977 *Annual Report* of Fuqua Industries, a diversified firm with interests in lawn and garden equipment, sports and recreation, entertainment, photofinishing, transportation, housing, and food and beverages: "Fuqua's strategy is to allocate resources into business segments having prospects of the highest return on investment and to extract resources from areas where the future return on investment does not meet our ongoing requirements. . . . The same principle of expanding areas of high return and shrinking areas of low return is constantly extended to product lines and markets within individual Fuqua operations. Only with a diversified business structure is the application of this modern fundamental business investment policy practical." Another highly diversified firm, Bangor Punta Corporation, explains that the role of its corporate headquarters is "to act as a central bank supplying operating units with working capital and capital funds" (1966 *Annual Report*).

¹⁷ Myers and Majluf (1984) show that if the information asymmetry between a standalone firm and potential outside investors is large enough, the firm may forego investments with positive net present value rather than issue risky securities to finance them.

making it easier to redeploy the assets of poorly performing divisions (Gertner, Scharfstein, and Stein, 1994). More generally, these control rights allow HQ to add value by engaging in "winner picking" among competing projects when credit to the firm as a whole is constrained (Stein, 1997). Fifth, the internal capital market may react more "rationally" to new information: those who dispense the funds need only take into account their own expectations about the returns to a particular investment, and not their expectations about other investors' expectations. Hence there would be no speculative bubbles or waves.

Bhide (1990) uses the internal capital markets framework to explain both the conglomerate merger wave of the 1960s and the divestitures of the 1980s, regarding these developments as responses to changes in the relative efficiencies of internal and external finance. For instance, corporate refocusing can be explained as a consequence of the rise of takeover by tender offer rather than proxy contest, the emergence of new financial techniques and instruments like leveraged buyouts and high-yield bonds, and the appearance of takeover and breakup specialists like Kohlberg Kravis Roberts which themselves performed many functions of the conglomerate HQ (Williamson, 1992). Furthermore, the emergence of the conglomerate in the 1960s can itself be traced to the emergence of the M-form corporation. Because the multidivisional structure treats business units as semi-independent profit or investment centers, it is much easier for an M-form corporation to expand via acquisition than it is for the older unitary structure. New acquisitions can be integrated smoothly when they can preserve much of their internal structure and retain control over day-to-day operations. In this sense, the conglomerate could emerge only after the multidivisional structure had been diffused widely throughout the corporate sector.

Internal capital market advantages, then, explain why diversification can increase the value of the firm. During the 1960s, entrepreneurs took advantage of financial market imperfections (many due to regulatory interference) to form large, highly diversified firms (Hubbard and Palia, 1998; Klein, 1998b). They also benefitted from government spending in high-technology and other defense-related businesses, which were particularly suited for acquisition. In the two subsequent decades, financial-market performance improved, reducing the internal capital market advantages of conglomerate firms.

If entrepreneurs have a special ability to manage information and allocate financial resources within the firm—if diversified firms "supplant" external capital markets—then why are capital markets necessary at all? Why not, to paraphrase Coase's (1937, pp. 42–43) second question, organize the entire economy as one giant conglomerate? The answer is that the argument for internal capital market advantages does not "scale up"; it applies only to firms that are themselves engaged in rivalrous competition. This situation, in turn, implies strict limits to firm size, even for large conglomerates.

The argument for the efficiency of internal capital markets is that compared with outside investors, the entrepreneur can extract *additional* information about divisional requirements and performance. It is not that the entrepreneur's knowledge *substitutes* for the knowledge embodied in market prices. To evaluate the merit of a proposed investment, the central management of a diversified conglomerate still relies on market prices to calculate expected (money) benefits and cost. Internal accounting does not substitute for money prices; it merely uses the information contained in prices in a particular way. When capital-goods prices are distorted—for example, because of financial market regulation—then the entrepreneur's additional knowledge is that much more valuable. So under those conditions we would expect an increase in M-form corporations, allocating resources via internal capital markets. During the 1960s that is exactly what we observed.

Correctly understood, the internal capital markets hypothesis does not state that internal capital markets *supplant* financial markets. It states that internal capital markets *supplement* financial markets. Even ITT's Harold Geneen, LTV's James Ling, Litton's "Tex" Thornton, and the other conglomerators of the 1960s were constrained by the need for economic calculation in terms of money prices. Thornton's "Whiz Kids" have been criticized for their advocacy of "scientific management" or "management by the numbers." Yet Thornton's techniques were quite successful at Litton. It was only when his disciple Robert McNamara tried to apply the same techniques to a nonmarket setting—the Vietnam War—that the limitations of "scientific management" were revealed.¹⁸

¹⁸ For more on the relationship between Thornton and McNamara, see Shapley, 1993, and Byrne, 1993.

6.3 Comparative corporate governance

How well do various systems of corporate governance function? The last few years have seen the growth of a new literature on "comparative corporate governance," the study of alternative means of governing relations between firm owners and managers. The typical comparison is between stock-market systems like those in the U.S. and U.K., and bank-centered systems like those in Germany and Japan (Roe, 1994, 1997; Gilson and Black, 1997; Milhaupt, 1997). According to Roe, the phenomenon he calls "strong managers, weak owners" is an outgrowth not of the market process, but of legal restrictions on firm ownership and control. In the U.S., for example, banks and other institutions are forbidden from owning firms; antitrust laws prohibit industrial combinations like the Japanese *keiretsu*; and antitakeover restrictions dilute the effects of the takeover mechanism. Laws that require diffuse ownership create what Roe terms the "Berle–Means corporation," in which "fragmented ownership shifts power in the firm to managers" (p. 93).

Mises makes a very similar argument in *Human Action*. There he notes that "the emergence of an omnipotent managerial class is not a phenomenon of the unhampered market economy," but a result of government policy (Mises, 1949, p. 307). Here he expands upon his earlier analysis in *Bureaucracy* (1944, p. 12), where he attacks the claim that bureaucracy follows naturally from firm size. Mises conceives of bureaucracy as rule-following, as opposed to profit-seeking, behavior. He reserves the term "bureaucratic management" for the governing of activities that have no cash value on the market. As long as a firm's inputs and outputs are bought and sold, the central management of the firm will have the information provided by market prices to evaluate the efficiency of the various branches and divisions within the firm. Then subordinate managers can be given wide discretion to make daily operational decisions, without the pursuit of profit.¹⁹ If an organization produces a good or service that has no market price—the output of a govern-

¹⁹ Chapter 1 of *Bureaucracy*, on profit management and the sources of entrepreneurial profit, contains a remarkably lucid account of economic calculation under capitalism and its impossibility under socialism. "To the entrepreneur of capitalist society a factor of production through its price sends out a warning: Don't touch me, I am earmarked for another, more urgent need. But under socialism these factors of production are mute" (Mises, 1944, p. 29).

Mises also provides a very Coase-like discussion of the make-or-buy decision, though without citation (p. 33).

ment agency, for example—then subordinate managers must be given specific instructions for how to perform their tasks.

The fact that managers in a private firm have latitude to make day-to-day decisions, Mises argues, does not make the firm "bureaucratic." "[N]o profit-seeking enterprise, no matter how large, is liable to become bureaucratic provided the hands of its management are not tied by government interference. The trend toward bureaucratic rigidity is not inherent in the evolution of business. It is an outcome of government meddling with business" (Mises, 1944, p. 12). By this Mises means that government interference impedes the entrepreneur's use of economic calculation and the attempt to use prices to impose managerial discipline. Mises gives three examples (pp. 64–73): taxes and price regulations that interfere with corporate profits (distorting an important signal of managerial performance); laws that interfere with hiring and promotion (including the need to hire public relations staffs and legal and accounting personnel to comply with government reporting requirements); and the omnipresent threat of arbitrary antitrust or regulatory activity, in response to which entrepreneurs must become adept at "diplomacy and bribery" (p. 72). The effects of legal restrictions on corporate governance an organizational form is an important and growing area, and further research from an Austrian perspective is sorely needed.

6.4 Financiers as entrepreneurs

As discussed above, the market for corporate control places strict limits on the ability of managers to pursue their own goals rather than those of the capitalist-entrepreneurs. However, in the mainstream literature at least, there is much debate on the effectiveness of the takeover mechanism in providing managerial discipline.²⁰ If managers desire acquisitions to increase their own prestige or span of control—to engage in "empire building"—then an unregulated market will generate too many takeovers. Indeed, several studies have found a sharp divergence between market participants' pre-merger expectations about the post-merger performance of merging firms, and the firms' actual performance rates. Ravenscraft and Scherer's (1987) large-scale study of manufacturing firms, for example, found that while the share prices of merging firms did on average rise with the announcement of the proposed restructuring, post-merger profit rates

²⁰ For overviews of this literature see Romano, 1992, Shleifer and Vishny, 1997, and Zingales, 1997.

were unimpressive. They find that nearly one-third of all acquisitions during the 1960s and 1970s were eventually divested. Ravenscraft and Scherer conclude that mergers typically promote empire building rather than efficiency, and they support increased restrictions on takeover activity. Jensen (1986, 1993) suggests changes in the tax code to favor dividends and share repurchases over direct reinvestment, thus limiting managers' ability to channel free cash flow into unproductive acquisitions.

However, the fact that some mergers—indeed, many mergers, takeovers, and reorganizations—turn out to be unprofitable, does not imply market failure or necessarily prescribe any policy response. Errors will always be made in a world of uncertainty. Even the financial markets, which aggregate the collective wisdom of the capitalist-entrepreneurs, will sometimes make the wrong judgment on a particular business transaction. Sometimes the market will reward, *ex ante*, a proposed restructuring that has no efficiency rationale. But this is due not to capital market failure, but to imperfect knowledge. Final judgments about success and failure can be made only *ex post*, as the market process plays itself out. Moreover, there is no reason to believe that courts or regulatory authorities can make better judgments than the financial markets. The decisions of courts and government agencies will in fact tend to be far worse: unlike market participants, judges and bureaucrats pursue a variety of private agendas, unrelated to economic efficiency. Furthermore, the market is quick to penalize error as it is discovered; no hearings, committees, or fact-finding commissions are required. In short, that firms often fail is surprising only to those committed to textbook models of competition in which the very notion of "failure" is defined away.

Another criticism of the market for corporate control is that unregulated financial markets engage in too few takeovers, due to a free-rider problem associated with tender offers (see, for example, Scharfstein, 1988). Critics point out that if the difference between the current (undervalued) price of the firm and its after-takeover market value is common knowledge, then the target firm's shareholders will refuse to tender their shares until the current price is bid up, appropriating a share of the returns to the acquiring firm. These critics conclude that regulation, not the takeover market, should be used to discipline managers.

The flaw in this argument is that it assumes perfect knowledge on the part of investors. The typical shareholder will *not* usually have the same information as incumbent managers, outside "raiders," and other specialists. It is not in the small shareholder's interest to learn these details; that is why he delegates such responsibilities to the managers in the first place. As Hayek (1945) described it, there is a "division of knowledge" in society. The raider who discovers a difference between a firm's current market value and its potential value under new management has an opportunity for an entrepreneurial profit (less the transaction costs of takeover). Because shareholders have delegated these responsibilities, they will not usually earn a share of this profit. Nonetheless, as Rothbard (1962, p. 372) observes, because shareholders (owners) *choose* to delegate operational responsibility to managers—contracting out for the managerial function—they themselves retain the ultimate rights of control.

Moreover, the post-takeover market value of the firm is uncertain; the raider's profit, if he is successful, is the reward for bearing this uncertainty. In this sense the takeover artist is a Misesian capitalist-entrepreneur. This account, however, could use further elaboration. For example, how is the bearing of uncertainty distributed among participants in various forms of restructuring? How do regulatory barriers hamper the capitalist-entrepreneur's ability to exercise the entrepreneurial function in this context?

7. Conclusions

The main message of this paper is that Austrians can continue to work within the contractual, or Coasian, approach to the firm in elaborating the insights discussed above. In particular, the problem of corporate governance, and the corollary view that firms are investments, belongs at the forefront of Austrian research on the theory of the firm. Emphasis should thus be placed on the plans and actions of the capitalist-entrepreneur.

A particularly undeveloped area concerns the provision of capital to small, "entrepreneurial" ventures. Most of the literature on governance focuses on the large corporation, and the use of stock and bond markets to govern these organizations. Equally important, however, are smaller, privately held firms, financed with venture capital or other forms of investment. So far, the firm-as-investment literature has said little about these organizations, despite their growing impor-

tance, particularly in high-growth, technologically advanced industries like software and biotechnology. Further research in this area is sorely needed.

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