

MANAGEMENT ENTRENCHMENT The Case of Manager-Specific Investments*

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We describe how managers can entrench themselves by making manager-specific investments that make it costly for shareholders to replace them. By making manager-specific investments, managers can reduce the probability of being replaced, extract higher wages and larger perquisites from shareholders, and obtain more latitude in determining corporate strategy. Our model of entrenchment has empirical implications that are consistent with the evidence on managerial behavior.

1. Introduction

Corporate managers are subject to many pressures to act in the interest of shareholders. These pressures include monitoring by the board of directors [Fama and Jensen (1983)], the managerial labor market [Fama 1980]), product market competition [Hart (1984)], and the threat of a takeover [Jensen and Ruback (1983), Scharfstein (1988)]. These disciplinary forces do not appear to be totally effective, however. Managers still consume expensive perquisites [Jensen and Meckling (1976)], diversify at a high cost to shareholders [Morck, Shleifer, and Vishny (1990)], and oppose hostile takeovers that raise shareholder wealth.

In this paper, we describe how managers counter disciplinary forces by entrenching themselves, that is, by making themselves valuable to shareholders and costly to replace. Our model of entrenchment describes the choice of physical investments by the firm, the structure of its contracts, the motivation behind diversification strategies, and bust-up takeovers.

We show that a manager has an incentive to invest the firm's resources in assets whose value is higher under him than under the best alternative

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manager, even when such investments are not *ex ante* value-maximizing. Because such investments are most valuable under the current manager, we refer to them as manager-specific. As a result of such entrenching investments, replacing the manager is costly and he can extract from shareholders higher compensation, in the form of a higher salary or greater discretionary behavior.

Although most of our discussion deals with the top officers of the firm, the model is applicable to any person who values his or her job. A secretary, for example, has an incentive to design ways of keeping records or computer files that are very costly for anyone else to figure out. This secretary is using the resources of the employer to become irreplaceable. Similarly, a plant manager can hide details of operations from headquarters, or always be in the middle of a new project that he alone can complete. This manager is entrenching himself by making it costly for any potential replacement to step into his shoes. He benefits by gaining greater job security and more freedom of action.

By describing entrenchment in terms of manager-specific investments, we extend the earlier literature on managerial behavior. Like Berle and Means (1932), Jensen and Meckling (1976), and Jensen (1986), we are considering a conflict of interest problem. Specifically, managers serve as shareholders' agents and have an incentive to take actions that do not maximize the welfare of the principal. But we focus on a particular version of this problem: excessive investment in assets complementary to managers' skills. Because such investments make managers valuable to shareholders, they enable managers to raise their own compensation. The degree of entrenchment in our theory is characterized by how specific the firm's assets are to the incumbent managers' skills and knowledge.

An agent's ability to take advantage of a principal who has made an irreversible investment in their relationship has been previously stressed by Williamson (1975), Klein, Crawford, and Alchian (1978), and others.¹ This work shows that an important feature of many long-term relationships is the specificity of assets used in them. When contracts are incomplete, the principal can take advantage of an agent investing in the relationship-specific assets. To reduce his exposure, the agent reduces his investment in these assets. In our model, in contrast, managers make too many rather than too few investments specific to their own talents. The reason is simply that they are investing shareholders' money rather than their own. By using shareholders' money to make manager-specific investments, managers bind shareholders to themselves.

Our paper does not ask what the primitive objectives of managers are – wealth, fame, or the consumption of perquisites. Rather, it asks how

¹Recent contributions to this literature include Grout (1984), Grossman and Hart (1986), Rotemberg and Saloner (1987), and Feinstein and Stein (1988).

they should position themselves to be able to pursue those objectives. This focus on the process of entrenchment does shed light on some managerial objectives, however. For example, according to Baumol (1959), managers pursue growth in sales. In our model, excessive growth of the firm in the directions suggested by the CEO's talents and experience is a means of entrenchment. Such growth spreads a given ability advantage over a larger enterprise, increasing the difference in profits under the incumbent and his potential replacements. The larger the absolute gap in profits, the more latitude the incumbent can demand.

For example, consider a railroad with a large free cash flow. The CEO decides whether to commit this cash to upgrading the railroad or to raising dividends. If the CEO is the best available person to run the railroad, we argue that the railroad investments will be made, even if the value-maximizing strategy is to distribute the free cash flow as dividends. Once additional resources are committed to the railroad, the current CEO becomes more firmly entrenched. If, in contrast, he distributes the free cash flow, he will preside over a smaller total value of manager-specific assets. The resources he can extract from the shareholders once the firm upgrades the railroad – in the form of wages, perquisites, or latitude to allocate capital – are greater than what he could extract if he raised dividends. Raising the shareholders' commitment to the railroad raises their commitment to the manager as well.

The manager in this example may invest in railroads simply because he prefers running railroads. But we stress that the manager's ability to pursue projects that do not maximize value is predicated in part on his being valuable to shareholders. He therefore will make investments that make him valuable, *whether or not he enjoys them for their own sake*.

Some of the implications of our theory are:

- (1) Corporate managers invest in businesses related to their own background and experience, even when such investments are not profitable for the firm.
- (2) Managers try to make too many of the firm's contracts implicit rather than explicit.
- (3) Firms divesting assets almost always raise their market value, but firms making acquisitions often reduce their market value.
- (4) Hostile takeovers are often followed by bust-ups of acquired firms. In such bust-ups, the sum of the parts is worth much more than the target as a whole.
- (5) Firms earning the most negative returns from diversification are in declining industries and are likely to have underperformed their industry peers. Bidding firms' losses are larger when they compete against bidders with greater experience in the target's industry.
- (6) To limit entrenchment, even firms with ample internal funds and cheap access to external capital impose binding capital constraints on their

divisions and use above market discount rates in the capital budgeting process.

The next section describes our model, and section 3 applies it to a range of actions by top executives. Section 4 focuses on acquisitions and divestitures, including hostile bust-up takeovers. Section 5 considers some mechanisms that can reduce managers' ability to entrench themselves, and section 6 concludes the paper.

2. A model of manager-specific investment

A manager collecting rents at his current job will do what he can to keep it. That usually involves making corporate control mechanisms more expensive to use, but also making the manager more valuable to shareholders than any alternative. As a result of such entrenchment, a manager can raise his wage in negotiations with the board of directors, as well as obtain more latitude in running the firm. In this section we present a simple model of entrenchment in which managers take actions that raise their value to shareholders relative to alternative managers.

We assume that control mechanisms such as the board of directors, the managerial labor market, and hostile takeovers are only partially effective. It is in the interest of the manager to make them less effective. We show how manager-specific investments help the manager reduce the threat of replacement. Of course, manager-specific investments are only one entrenchment device; others include antitakeover measures such as poison-pill preferred stock or staggered terms for directors. We discuss these devices briefly in section 6.

Our model focuses on manager-specific investments made with corporate resources and allowed to proceed without interference by the board. The board may fail to interfere because it is insufficiently well informed to evaluate the investment, or because board members approve of the manager's basic corporate strategy. After the cost is sunk, the board may or may not discover that the investment was value-decreasing. For example, deciding whether the manager overpaid by 10% to acquire a company with a long-lived, growing income stream is very difficult even several years after the acquisition. The board could base its evaluation on how the firm's share price reacts to the acquisition announcement, but this would show the board to have little respect for the superior information and judgment of management. Boards seem to use the market's reaction to an announcement as only one piece of data in their evaluation rather than as the definitive indicator.

For our purposes, it is important only that the board perceives an increase in the value of the incumbent's services in comparison with those of alternative managers once the investment is made. It may be easy for the board to

determine that a particular investment has made the firm more dependent on the incumbent even when it is still unsure whether the investment was value-maximizing. A rational capital budgeting system should take account of the manager's incentive to make a disproportionate number of manager-specific investments. In section 5 we use this idea to explain why corporate divisions are often given binding capital budgets by their central offices.

An important attribute of any manager-specific investment is its irreversibility; that is, the fraction of the value of the assets that cannot be recovered by reselling them. A high degree of irreversibility ensures that the incumbent remains valuable to shareholders even if the board later realizes that a manager-specific investment is not value-maximizing. Not all investments are irreversible. For example, hiring workers is not an effective manager-specific investment, since a potential replacement can easily fire them. On the other hand, physical investment in a specialized plant that the incumbent is very good at operating is more effective if the capital can be sold off only at a substantial loss.

Manager-specific investments enter our model in two ways. First, they affect the value of the firm and hence the manager's wealth as a shareholder. Second, they affect the incremental profits from employing the current manager rather than any alternative. For simplicity, we assume that the manager does not derive utility from these investments directly. He chooses the investment level to increase his wealth as a shareholder, but also to raise the difference between the firm's value under him and under the next best manager. The last aspect of the choice is the primary focus of the paper.

Denote by I_{inc} the manager-specific investment the incumbent makes. The value of the firm under the incumbent before his compensation is paid is then equal to

$$V_{\text{inc}} = \alpha_{\text{inc}} \cdot B(I_{\text{inc}}) - p \cdot I_{\text{inc}}, \quad (1)$$

where α_{inc} is a measure of the incumbent's ability to manage this investment, $B(I_{\text{inc}})$ is the present value of variable profits per unit of ability when investment is I_{inc} , and p is the per-unit cost of investment. We assume that $B' > 0$, $B'' < 0$, and $\lim B' = 0$ as I_{inc} gets large.

If the incumbent is replaced by an alternative manager, the value of the firm (again, before compensation) is

$$V_{\text{alt}} = \alpha_{\text{alt}} \cdot B(I_{\text{inc}} + I_{\text{alt}}) - p \cdot (I_{\text{inc}} + I_{\text{alt}}), \quad (2)$$

where α_{alt} is the alternative manager's ability and I_{alt} is the incremental investment he makes.

We make two key assumptions about manager-specific investments. First, they are irreversible, meaning that

$$I_{\text{alt}} \geq 0. \quad (3)$$

For simplicity, we are assuming that assets can be sold off only at a price of zero. In general, we could let them be sold off at some positive price below the price paid for them.

Second, we assume that the investment is manager-specific, meaning that the incumbent is better at managing it than is his potential replacement:

$$\alpha_{\text{inc}} > \alpha_{\text{alt}}. \quad (4)$$

This assumption implies that by making manager-specific investments, the incumbent raises variable profits under himself relative to those under the alternative. If $\alpha_{\text{inc}} < \alpha_{\text{alt}}$, the incumbent has an incentive to invest in other areas to avoid replacement, perhaps by entering a new business.

The benefit to the incumbent from making manager-specific investments is an increase in his compensation. By compensation we mean all transfers from shareholders that the manager negotiates with the board, including direct monetary compensation, expenditures on perquisites such as airplanes and charity, and pet projects the board accedes to while knowing they are wasteful. Pet projects differ from manager-specific investments in having consumption value but no entrenchment value; manager-specific investments have entrenchment value and may have consumption value, but do not have to. For simplicity, we are assuming that manager-specific investments have no consumption value. Negotiated compensation does not include embezzlement or wasteful expenditures that the board does not recognize as such.

We assume that the manager receives his bargained-for utility level in the most efficient way, so that the dollar cost to shareholders of any component of the wage is the same as the dollar benefit to the manager. In practice, this assumption may be far from true, especially when monetary compensation of executives is institutionally constrained [Alchian and Kessel (1962), Becker (1962)]. Examples of such constraints are fairness considerations vis-à-vis other workers in the firm and shareholder lawsuits claiming self-dealing by directors. Although such constraints on executive pay are common, we do not deal with them here.

The manager's compensation is determined in negotiations with the board after the manager-specific investment is made. This timing formalizes the idea that such investments often obtain board approval before the board fully understands their consequences for firm value. We assume that the manager's compensation is given by a function f of the difference between the firm's profits under the incumbent and the alternative:

$$w = f [\alpha_{\text{inc}} \cdot B(I_{\text{inc}}) - (\alpha_{\text{alt}} \cdot B(I_{\text{inc}} + I_{\text{alt}}) - p \cdot I_{\text{alt}})]. \quad (5)$$

Compensation does not depend on the cost of the incumbent's investment, since by the time the board contemplates keeping or replacing the manager

that cost is sunk. The board ignores the sunk cost and simply employs the best manager for the job now that the investment is in place.² The more the firm can earn under the incumbent in relation to the alternative, the higher the compensation the incumbent can demand. We do not require that the board's knowledge of relative profitability under the incumbent and the alternative be very detailed. In particular, the board need not have a specific replacement in mind; performance under the alternative may be estimated as some industry benchmark the board expects to achieve if the incumbent is fired.

Fig. 1 shows an example of the function f . First, f is increasing: higher relative profits enable the manager to extract higher compensation. Second, f is equal to 0 below some point $-C$, where C measures the leniency and lack of oversight by the board. In practice, the degree of leniency, C , probably depends on characteristics of the firm's assets that are endogenous. For example, the level of C probably increases with firm size. In that case, C would be interpreted as the tolerated shortfall in some profitability *ratio* rather than in the absolute level of profits. Importantly, C itself can often be managed: witness the antitakeover amendments and managerial influence over selection of outside directors. We do not deal with this important avenue for entrenchment in this paper.

When the board expects the firm under the alternative manager to earn more than C of extra profit relative to the incumbent, it fires the incumbent. When C is close to 0, the board is vigilant and eager to remove the incumbent should profits under him fall below those expected from the alternative. In practice, many boards are passive and C is very high. By letting the compensation function be 0 for sufficiently negative relative profits, we assume that sufficiently bad managers are fired. Finally, we let $f' < 1$, so incumbents get less than all of the marginal difference in profits.

With this model of compensation, the incumbent chooses I_{inc} to maximize

$$y = w + \theta [\alpha_{\text{inc}} \cdot B(I_{\text{inc}}) - p \cdot I_{\text{inc}} - w], \quad (6)$$

where w is given by (5) and θ is the manager's fractional share ownership. We assume that $\theta \ll 1$. This ensures that the manager does not completely internalize the value consequences of his manager-specific investments. An incumbent with a high enough ownership stake might choose to sell the firm to someone who can run it better just to get the additional value. In this case, $I_{\text{inc}} = 0$ and $w = 0$. Although this case describes some founders or large equity holders nearing retirement [Morck, Shleifer, and Vishny (1988)], in this paper we focus on managers with low ownership who want to stay on. Shleifer and

² Compensation also depends on the manager's outside wage, which we have normalized to be 0. We ignore the dependence of the manager's outside wage on his manager-specific investment strategy. In principle, if the managerial labor market has a sufficiently adverse reaction to his manager-specific investments, the manager will be deterred from making them.

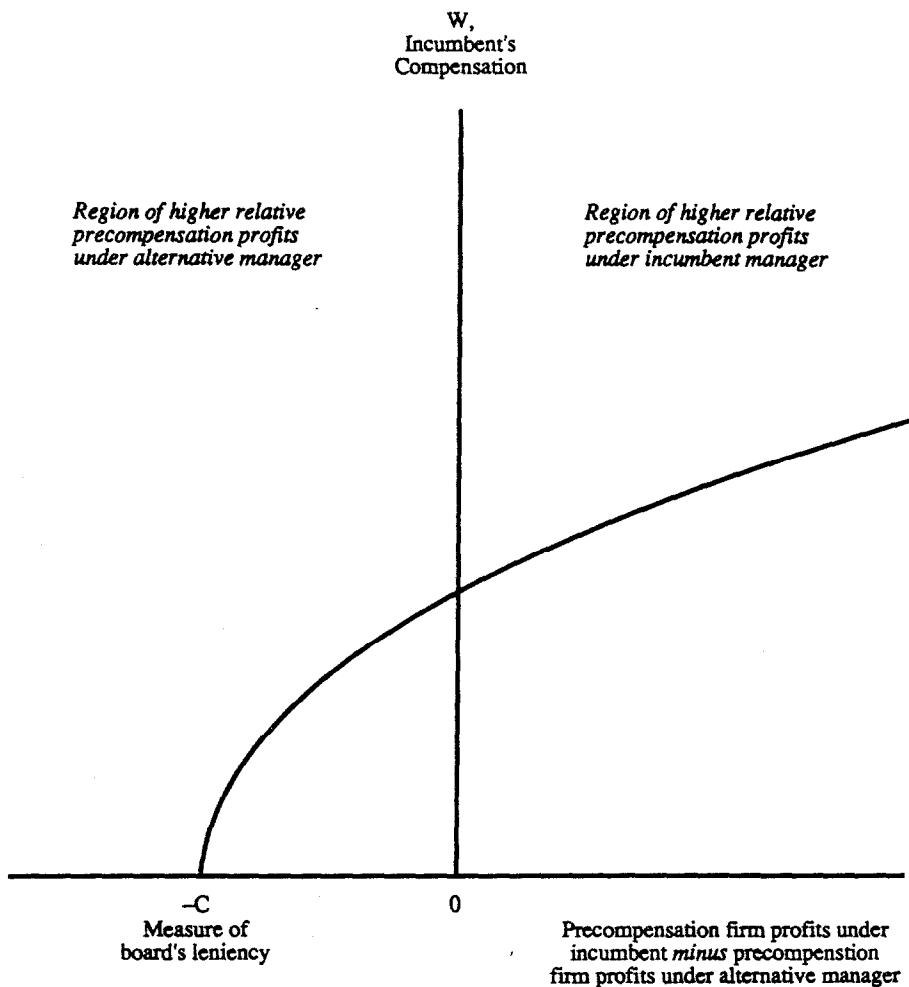


Fig. 1. Incumbent manager's compensation as a function of precompensation profits under incumbent minus precompensation profits under alternative manager [from eq. (5)].

Vishny (1988) discuss some institutional and efficiency reasons why many top executives own very little of the firms they run, even when it is seemingly in shareholders' interest to furnish those equity stakes for free. Here we simply make equity ownership an exogenous variable.

In this model, the incumbent is better at managing a particular line of business than the potential replacement, and thus wants to invest more in that line of business than does the potential replacement. Irreversibility is a binding constraint on the alternative manager and we have $I_{alt} = 0$ in equilibrium. The

objective function of the incumbent can then be rewritten as

$$y = f[(\alpha_{inc} - \alpha_{alt}) \cdot B(I_{inc})](1 - \theta) + \theta[\alpha_{inc} \cdot B(I_{inc}) - p \cdot I_{inc}]. \quad (7)$$

The incumbent puts weight θ on the precompensation market value of the firm and weight $1 - \theta$ on the difference between variable profits under himself and under the alternative. Because the incumbent places heavy weight on variable profit, he fails to internalize the cost of investing. In particular, our results show that the manager overinvests in relation to the precompensation value-maximizing level to distance himself from potential replacements and to raise his compensation.

The (precompensation) value-maximizing investment I^* is given by

$$\alpha_{inc} \cdot B'(I^*) = p. \quad (8)$$

By contrast, the first-order condition for the manager's personal optimum is

$$\theta[\alpha_{inc} \cdot B'(I_{inc}) - p] + (1 - \theta)f' \cdot B'(I_{inc})(\alpha_{inc} - \alpha_{alt}) = 0. \quad (9)$$

The second derivative of the objective function is always negative and, subject to our assumption on the limit of B' , the manager has an interior investment optimum. At this optimum, the higher compensation the manager gets by raising I_{inc} is exactly offset by a capital loss on his shares.

The investment level satisfying (9) exceeds the precompensation value-maximizing level under the incumbent, I^* . Because the incumbent is better at managing the investment than the replacement, at I^* the replacement's profits are falling in I , whereas the incumbent's are flat. The difference in profits under the incumbent and the replacement, and hence the incumbent's wage, is therefore rising at I^* . To raise his compensation, the incumbent invests beyond I^* .

This result suggests a reason why managers like growth. In some previous work [Baumol (1959), Marris (1964)], growth in sales is taken as an objective in itself, or a consequence of the responsiveness of conventional wage-setting to size [Baker, Jensen, and Murphy (1988)]. In our model, growth by itself does not raise wages, but growth in areas specific to the manager's skills provides benefits through entrenchment. In fact, the firm might be smaller than the optimum size in the areas where the incumbent is weak and hence can be threatened. Nonetheless, once the CEO identifies his comparative advantage in management and defines a compatible corporate strategy, he may appear to be simply maximizing the growth of the firm's existing business.

Eq. (9) suggests that the incumbent manager's ownership stake is the only force limiting manager-specific investments. We could specify the model to derive limits in at least two other ways. First, we could have the board limit

the amount of such investment directly. Second, we could have the board fire the incumbent if market value falls too much, even when the negative net-present-value investments responsible for the drop in value are irreversible and the incumbent is the best one to manage the investments already in place. In practice, manager-specific investments will eventually be limited by the board or by a hostile acquirer when profits are too low.

In sum, manager-specific investments can impose two distinct costs on shareholders. First, holding management compensation fixed, the level and type of investment may not be value-maximizing. Second, even when manager-specific investments produce as much precompensation shareholder value as other investments, shareholders lose because specific investments allow the incumbent to capture a larger share of the quasi-rents. In fact, even when manager-specific investments produce more precompensation value than other investments, but give the incumbent a large amount of bargaining power, the board may sometimes prevent such investments. The inefficiency results from the incumbent's inability to commit himself *ex ante* to not exploiting shareholders *ex post*.

The first cost to shareholders is also a social inefficiency, whereas the second is simply a transfer from shareholders to managers. Although the latter transfer might be small – total management compensation may be low in relation to firm value – the distortion from excessive investment in manager-specific capital can be enormous. As with other rent-seeking activities, large inefficiencies can result from pursuit of fairly small rents.

3. Contracts

Managers have considerable discretion over the structure of the firm's contracts with employees, suppliers, and customers. In some cases, managers can sign complete explicit contracts that entrench them, such as debt contracts made on favorable terms with a covenant that the debt is due if management changes.³ Golden parachutes are also an example of explicit entrenching contracts. The benefits to the manager from such contracts should properly be counted as part of his compensation, since the board sees and approves the entrenching contract. Because explicit contracts are often an overt transfer of shareholder wealth to managers, they are likely to be limited by the board and by shareholders.

Manager-specific implicit contracts, in contrast, are harder to monitor and restrict. Implicit contracts are often backed up by the manager's personal reputation rather than the firm's, so that the manager rather than the corporation owns the valuable trust of the other contracting party.

³ Recently, several bonds have been issued with covenants requiring full repayment if the firm is acquired. Such covenants are likely to entrench incumbent managers.

Workers will agree to implicit contracts when managers have a reputation for upholding them even when it later does not pay to honor those agreements. For example, this would occur if workers (or others) believe that the manager might be 'irrationally' honest or pursue some objective other than value maximization [Shleifer and Summers (1988)]. From the shareholders' point of view, these implicit contracts can be valuable, as they allow the firm to keep key employees, suppliers, and customers. As long as upholding such contracts rather than breaching them is of value to shareholders, the current manager is of value as well. In this way, implicit contracts entrench the incumbents.

The important role played by incumbent managers in supporting implicit contracts provides a reason why managers would choose to make some contracts implicit rather than explicit even in the absence of contracting costs. The firm retains the benefits of an explicit contract even if the manager is gone. In contrast, an implicit contract backed by the manager's reputation can make part of the value of the firm contingent on the manager's continued employment, and so help him entrench himself.

As an example, consider the case of valuable employees. Valuable employees are those paid less than the amount they contribute to profits. A manager can earn their loyalty by promising them promotions, perquisites, and high wages in the future. The employees might then perceive that their welfare is contingent on the continuity of the top management. They may believe, for example, that the incumbent can better measure their output, or has a greater (possibly 'irrational') commitment to the line of business they are in, or simply favors them as individuals. Because these employees expect their future returns from employment with the firm to be lower under a replacement manager, some of them may quit when the incumbent does since other opportunities have just become relatively more attractive. If these employees' loyalty increases the difference between the profits of the firm under the incumbent and the alternative, it also increases the incumbent's wage. Contrary to the interest of the shareholders, the incumbent will make sure that his departure is disruptive. A nice example of this theory is the threat by Steven Spielberg, the famous producer, to stop making his highly profitable movies with Warner studios if his friend Steve Ross, the CEO, leaves the company. Incidentally, Steve Ross is one of the highest paid CEOs in the United States.

Our treatment of contracts might explain how it can simultaneously be the case that the sudden death of an executive can lead to a large increase in the price of his company's stock [Johnson et al. (1986)] and that it is not in the interest of shareholders to have fired this executive. If the executive can arrange it so that the firm's customers (employees, suppliers) are more attached to him than to the firm, he can extract a very high wage. When this executive dies, the firm probably inherits many of his current and future contracts, but avoids the wage. As a result, the value of the firm rises. In contrast, if the board fires this executive, he can take the contracts with him,

since they are supported by his reputation. If these contracts earn some rents for the firm as well as for the manager, the value of the firm would fall if he were fired.

These examples suggest that a manager can entrench himself by making the value of current and future contracts contingent on his continued employment. As with other manager-specific investments, shareholders can be hurt in two ways. First, the implicit contract may simply not maximize precompensation value. This would be the case when the manager 'overinvests' in the relationship by making too many concessions in terms of compensation and/or exclusive dealing arrangements to obtain the loyalty of a key employee or supplier. Second, even when the form of the implicit contract maximizes precompensation value, the manager is still able to capture a larger share of the quasi-rents from shareholders.

4. Acquisitions and divestitures

In this section, we describe how managers acquire and divest businesses to entrench themselves. We assume that forcing top management to divest any or all of the firm's businesses is infeasible. An imperfectly informed board of directors is often unwilling to second-guess the CEO's decision to stay in a particular line of business, especially when a large-scale breakup of the firm is involved. This means that the cost of busting up the firm is the cost of mounting a successful hostile takeover.

To entrench themselves, managers should buy and sell assets to raise the difference between profits under them and under the next best manager. If bust-up takeovers are expensive, and if the board cannot easily evaluate strategic investments before they are made, managers can try to assemble portfolios of businesses that they can run more profitably than potential replacements. Moreover, managers will buy assets that entrench them even if these acquisitions reduce shareholder wealth.

Pursuit of entrenchment often leads managers to expand existing lines of business excessively. When the incumbent is considered a star performer in one of the firm's main businesses, he has an incentive to commit more resources to that business even when the marginal investment has a negative net present value. If, on the other hand, it becomes clear to the incumbent that potential replacements would run the firm's existing businesses better than he, he has an incentive to diversify into areas where he has a comparative management advantage. The impetus for diversification may come from the firm's poor financial performance in comparison with its industry peers or from a change in industry conditions that makes the incumbent's skills less valuable. For example, a CEO with experience in marketing or sales becomes less valuable than a cost-cutter when the firm loses its technological lead and has to sell a less differentiated more competitively priced product. To reduce

the threat of replacement by a cost-cutter or operations man, the CEO can acquire a firm with some established brand names that once again enables him to use his marketing skills.

By diversifying in these situations, the manager moves from virtually certain replacement to the prospect of keeping his job if his foray into the new business is successful. Even if the incumbent is far from the best possible manager for the newly acquired assets, he may still decrease his vulnerability as long as his performance in the firm's existing businesses is expected to be relatively worse. In terms of the model of section 2, this would be true when the board uses a weighted average of profitability ratios for comparable firms in the company's various businesses to evaluate the incumbent and fires him if his profitability ratio is too far below that benchmark. Morck, Shleifer, and Vishny (1989) present evidence that the probability of internally precipitated turnover of top management is higher in firms that underperform their industry peers.

Managers who decrease their chances of replacement by diversifying through acquisitions are willing to overpay for their targets. They do not always overpay, but are especially likely to do so when the firm is underperforming its industry peers or lacks growth opportunities in its existing business. Several recent studies provide evidence on bad acquisitions. Roll (1986) summarizes the studies showing that bidders in mergers often lose market value on the announcement of the bid. Lang, Stulz, and Walkling (1988) find that low- q firms lose market value when they announce a bid. This result is consistent with the prediction that poor performers are most threatened with replacement, and so are most willing to overpay for acquisitions that give them hope of retaining their jobs.

The other side of assembling a portfolio of businesses is divestitures. The divisions of the firm that are not best managed by the incumbents both reduce their compensation and make it more likely that someone else could run the combination more profitably. A divestiture benefits the incumbent if it raises the distance between him and his potential replacements.

Our model has contrasting implications for buyers in acquisitions and sellers in divestitures. Managers may overpay for acquisitions, since they use shareholders' money to buy a lower probability of replacement. Share prices of bidders fall when they overpay, especially when they compete for a target against specialists better qualified to run it. In a divestiture, even a CEO willing to sell a division at too low a price to decrease his vulnerability to replacement will rarely have to do so. The reason is simple. A manager wants to divest a division only when another manager can run it better or it is destroying shareholder value without producing any entrenchment benefits. As long as the incumbent can sell this division to another manager for a price that reflects higher profits under the acquirer, the divestiture must raise the market value of the selling firm. When these superior managers are bidding against

each other, they will pay more for the division than its value under the incumbent. This implies that, unlike acquisitions, divestitures should almost always increase the price of the divesting firm's shares. The distinction between acquisitions and divestitures comes about because the value of the firm under near-best management serves as a floor in any auction of the division's assets. This price, however, may be exceeded (or at least matched) by a bad manager making an acquisition just to decrease his vulnerability to replacement after poor performance in his firm's existing businesses.

This reasoning implies that the break-up value of the firm should exceed its value under the current management. First, the incumbents are not the best people to run many or most divisions. A better manager would pay more for a division he can run more profitably. Second, other managers in the market with nonvalue-maximizing objectives would be willing to overpay for some of the target's divisions. For these two reasons, takeover specialists can profitably acquire diversified companies, selling off each part to the highest bidding manager, and realize a large profit without themselves changing any of the operations. Bust-up takeovers improve efficiency when businesses are sold off to managers who can run them more profitably. They can reduce efficiency when divisions are sold to bad managers who are overpaying with shareholders' money to avoid replacement.

5. Mechanisms for countering entrenchment

The range of manager-specific entrenching investments that are difficult to prevent is very wide. Such investments can be made not only by top managers, but also by subordinates whose work cannot be effectively monitored. Since manager-specific investments can be very expensive to shareholders, we expect firms to find mechanisms that reduce the damage. When accurate evaluation of corporate strategy is difficult, these mechanisms will take the form of simple rules that make entrenchment more difficult.

One example is capital rationing. Boards of directors can ration funds for proposals by the CEO, but more commonly the central office rations capital for investment by the divisions. Central offices often use hurdle rates that are higher than the after-tax cost of capital to evaluate investment projects. In addition, they often give each division a binding capital budget [Brealey and Myers (1988, p. 113)]. These practices are hard to understand without appealing to some distortion in the capital budgeting process at the division level.

Capital rationing can cut off some manager-specific negative net-present-value investments pursued by division managers. It also helps to avoid the project-by-project lobbying and distortion of data by division managers seeking projects that entrench them. Capital rationing slows the rate of investment, so that a manager's performance can be observed before he is allowed to invest more. Of course, with capital rationing and high hurdle rates, some good projects, as well as entrenching investments, are shelved.

Another way to prevent entrenching investments is to select the right managers in the first place. For example, the board can control the choice of future manager-specific investments through its selection of the next CEO. To select a CEO is to select a bundle of abilities and by implication the character of investments. Recall the railroad example from the introduction, where the CEO with a background in railroads upgrades that business even though shareholders prefer dividends. Had the board appointed a CEO with a commitment to shareholder wealth enhancement rather than to railroads, it might have averted the problem. The critical role of the board is to pick a CEO whose selfish objectives would lead him to investments with the highest net present value [Vancil (1987)].

Finally, the board can prevent many entrenching investments simply by granting the CEO some insulation from competition for his job and/or lucrative severance pay. DeAngelo and DeAngelo (1983) conjecture that shareholders might want to give managers voting control or lucrative golden parachutes to cut the demand for entrenching investments.

6. Conclusion

We present a model of managerial entrenchment that describes how managers make specific investments to increase their value to shareholders. By making such investments, managers can reduce the probability of being replaced, extract higher wages and larger perquisites from shareholders, and obtain greater latitude in determining corporate strategy. The model has several empirical implications consistent with the evidence on managerial behavior.

We have intentionally avoided a much studied class of entrenching tactics that includes poison pills, staggered board terms, and greenmail. Such blatant entrenchment lies outside our model for two reasons. First, these tactics do not have the specificity and irreversibility features of manager-specific investments. Second, and more importantly, these actions are understood and still endorsed by the board. They take place either because the board has objectives other than shareholder interest in mind or because the board disagrees with the stock market on what serves shareholders' long-term interest. Consequently, these actions are properly treated not as manager-specific investments, but as part of managers' (or other employees') compensation.

There are two alternative hypotheses that we can contrast with our theory. The first says that managers' desired investments coincide with shareholders' and therefore managers maximize the market value of the firm. We agree that most investments that build on management strengths are probably value-maximizing even though they also have entrenchment value. But managers often invest beyond the value-maximizing level. There is ample evidence to recommend models of nonvalue-maximizing managerial behavior, particularly in declining industries. The evidence of resistance to takeovers by managers

with low ownership stakes [Walkling and Long (1984)], of wealth-decreasing investments in oil exploration [McConnell and Muscarella (1985)], and of wealth-decreasing acquisitions, especially by managers with low ownership stakes [Lewellen, Loderer, and Rosenfeld (1985)], adds up to a convincing case for deviations from market-value maximization.

It is harder to reject the view that managers undertake the projects they do only for consumption, and not for entrenchment. This hypothesis – which is in line with many earlier writings on managerialism – denies that compensation is in part determined by the attractiveness of alternative managers. Instead, it simply says that managers can do practically whatever they like. We do not believe that a CEO can do whatever he likes solely by virtue of his position. Acquiring power takes effort, and our model is an example of the form this effort takes. We admit, however, that it would be extremely difficult to reject this hypothesis empirically, since it basically says that managers like to do whatever we observe them doing.

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