Stockholder-Manager Conflicts and Firm Value

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The separation of ownership and control in a modern corporation often requires the delegation of significant decision-making authority to professional managers, which introduces the possibility that managers will have incentives to make decisions that benefit them at the expense of stockholders. We discuss the theory and empirical evidence on stockholder—manager conflicts, provide an overview of the problems that can arise in U.S. corporations, summarize recent empirical evidence on the effectiveness of the various mechanisms that can control these problems, and alert investors to global variations in problems and controls.

he performance of a firm is strongly influenced by managerial decisions about which markets to enter, what products to manufacture, how to price goods, how to respond to actions by competitors, and so on. The quality of these decisions depends not only on the ability of the managers but also on the incentives the managers have to make decisions that create value for stockholders. Through the board of directors, stockholders hire managers to operate the firm on their behalf. However, the managers do not necessarily have the same incentives as stockholders. Managers may decide to exert less effort on the job or to consume more perquisites than stockholders would like. Managers may also select investment, operating, or financial policies that fit their risk or time preferences rather than those of the stockholders.

Assessing how decisions made by a firm's managers affect stockholder value is an important dimension of the analysis of any firm. It requires understanding of the relationship between managers and stockholders—or, more specifically, understanding of where the incentives of managers and stockholders may diverge—and understanding of the effectiveness of various governance mechanisms in aligning those interests.

The Manager–Stockholder Relationship

The economic importance of the modern corporation results from combining the capital of many

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dispersed stockholders with the operational skills of a professional management team. Separating the ownership and management functions gives corporations access to a much larger pool of capital than is available to most sole proprietorships or partnerships. Corporations may thus pursue projects and production levels on a scale beyond the reach of other forms of business organizations. Realizing the benefits from these pools of capital, however, usually requires delegating day-to-day control of corporate assets to professional managers with specialized skills.

A classic principal-agent relationship arises when stockholders delegate decision-making authority to managers. Managers, as the agents of stockholders, are charged with making decisions that enhance the wealth of stockholders, the principals. Stockholders have capital at risk but only limited influence over the corporation's activities. They see corporations as investment vehicles and want managers to work diligently and efficiently toward the goal of maximizing the value of their equity. In contrast, managers view stock ownership as only one facet of their relationship with the firm. Managers also view the firm as a source of salary, perks, self-esteem, and/or recognition and as a means of creating value from their human capital. To protect and enhance these multiple sources of benefits to managers, only one of which is equity value, managers sometimes make decisions that benefit them personally at the expense of stockholders.

The only way for stockholders to prevent managers from making self-serving decisions is to design employment contracts that specify particular actions managers should take in all possible situations. Unfortunately, no one can foresee, when designing contracts for managers of complex

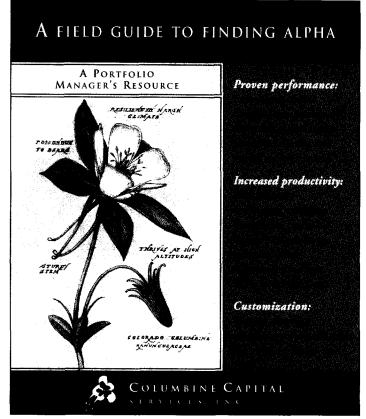
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organizations, all the future decisions that must be made, and the costs of trying to write such contracts would ultimately outweigh the benefits. Therefore, stockholders must bear some of the costs associated with self-serving behavior on the part of managers. Economists call the conflicts arising from such principal—agent relationships "agency problems" and call the value lost because of such problems "agency costs."

Types of Manager–Stockholder Conflict

Principal—agent conflicts can affect any of a firm's core functions—its investment, operating, or financial policies. Even small inefficiencies in these important areas can result in significant value losses for stockholders. Therefore, it is important that investors understand the types of agency problems that may exist in a corporate setting and the corporate attributes that are likely to make one type of problem more severe than another. The four types of agency problems that arise are defined in Exhibit 1 and discussed in the following sections.

The Effort Problem. Labor economists argue that workers trade off income for leisure by working until the marginal benefit from leisure just equals the marginal cost in terms of forgone income. Although not directly applicable to corporate managers, who often own some of the firm, work in a team or a multisegment environment, and are salaried employees, this general model can aid understanding of why effort-based agency problems arise. Jensen and Meckling (1976) demonstrated that the smaller the fraction of the firm a manager owns, the greater the manager's incentive to shirk, or to exert less than full effort, in creating value for stockholders. For example, suppose managerial shirking reduces the value of a firm's equity by \$1 million. The typical CEO of a large public U.S. corporation owns only 0.14 percent of the firm's total equity (Jensen and Murphy 1990), so shirking



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costs this firm's CEO only \$1,400. In contrast, the same decrease in effort costs a CEO who owns 10 percent of the firm \$100,000. For a given level of shirking, the cost to the manager increases with ownership. Of course, CEOs must not reduce their effort so much that they put their jobs, salaries, or promotion opportunities at risk. But the implication of this example is clear: Less managerial ownership implies lower incentives to work as hard as stockholders prefer and, therefore, greater potential losses in stockholder value.

Problem	Definition	
Effort	Managers may have incentives to exert less effort than stockholders expect them to.	
Horizon	Managers tend to have shorter horizons for achieving investment results than stockholders have.	
Differential risk preference	Managers typically have so much of their wealth tied to the ongoing viability of the firm that they tend to be more risk averse than stockholders.	
Asset use	Managers can have incentives to misuse corporate assets or to consume excessive perks because they do not bear the full costs of such actions.	

Because shirking is almost impossible to measure directly, empirical research in this area has focused on the observable activities of managers for evidence of shirking. In particular, this research examines whether managers' outside activities, such as corporate board memberships or highprofile positions as trustees of charitable or philanthropic organizations, benefit stockholders or are largely pursued by managers for income, prestige, and/or personal contacts. Rosenstein and Wyatt (1994) found that the stock prices of U.S. firms tend to decline when an announcement is made that an executive of the firm has accepted a board seat at another firm. This evidence is consistent with the argument that managers sometimes make personally beneficial decisions that reduce the value of the firms they manage. Rosenstein and Wyatt also discussed non-agency-cost explanations, however, that would be consistent with their results, and Booth and Deli (1996) found no direct evidence linking such outside activities to several measures of shirking or perk consumption.

The Horizon Problem. Executives also have time horizons that are different from stockholders'. Because corporations have infinite lives, stockholders are concerned with the value of an infinite series of future cash flows. In contrast, the claims of managers are largely limited to cash flows during their employment, so managers severely discount cash flows that are likely to occur after they leave the firm.

Differences in manager and stockholder horizons become increasingly important as an executive approaches retirement. Such an executive may give preference to investment or operating strategies that have lower costs and produce results more quickly than more profitable but expensive longterm investments. An example of this problem is the decision about how much a firm should invest in research and development. R&D expenditures can reduce a manager's compensation in the short term by reducing firm performance as reflected in accounting measures. Thus, a manager nearing retirement may bear the costs of R&D investments without reaping the benefits. Dechow and Sloan (1991) and Murphy and Zimmerman (1993) reported evidence that R&D expenditures decline as senior managers near retirement, but they disagreed about the reason. Dechow and Sloan argued that the decrease comes from the horizon problem, whereas Murphy and Zimmerman attributed the cuts in R&D to poor corporate performance.

The horizon problem becomes particularly acute when equity markets take a long time to recognize the true value of a firm's new projects.

Industries in which product development cycles are long or secrecy is important to a product's success are especially vulnerable to such horizon problems. DeAngelo and Rice (1983) noted that managers may reject attractive projects if they appear unprofitable to the capital markets initially because the managers fear being replaced through a disciplinary takeover. A manager who fears short-term market reaction may favor projects with high initial cash flows even though the projects have lower positive net present values. Unfortunately, because outsiders cannot observe all the projects managers consider, empirical measurement of the effect of this problem on stockholder wealth is difficult.

The Differential Risk Preference Problem.

Portfolio theory states that diversification eliminates industry- or firm-specific risk but not the effects of systematic or economywide fluctuations on a firm's stock returns. Consequently, a well-diversified investor is primarily concerned with systematic risk.

Managers are typically not well diversified. A large portion of their wealth is typically tied to the success of the firm for which they work. Their current and future employment income, the value of their firm's stock and options, and some of the value of their experience and training—all depend on the survival of the firm. When compensation is composed largely of a fixed salary and managers have a significant investment in firm-specific human capital that would be difficult to transfer to another firm, the managers' risk preferences are closer to those of a fixed-claim holder (a lender) than to those of a stockholder. Financial distress or bankruptcy can greatly reduce a manager's net worth by negatively affecting his or her reputation in the labor market. Whether a manager departs from a distressed firm voluntarily or is forced out, being associated with a distressed firm increases the difficulty of finding another job with comparable compensation and responsibilities.

Although an event that threatens the survival of a firm can be devastating for managers, their compensation packages typically provide only limited upside payoffs when things go well. Bonus plans are often capped at a specific percentage of salary or at a fixed aggregate dollar amount. Furthermore, the small fraction of equity that is owned by the typical CEO of a public U.S. corporation provides limited potential for wealth gains. Jensen and Murphy (1990) found that, on average, the sensitivity of a CEO's compensation, including option grants, to changes in firm value is 0.00325. In other words, a \$1,000 increase in firm value increases the

average CEO's compensation by only \$3.25.

The result of this aspect of a manager's situation is that managers, like bondholders, who can lose much when a firm becomes distressed but benefit relatively little on the upside, tend to prefer less risk than stockholders. This aspect is what is meant by the differential risk preference problem.

In support of their risk preferences, managers can use a firm's investment and financial policies to reduce the total risk the firm is subject to. For instance, instead of betting heavily on a new, potentially pathbreaking product, technology, or market, a manager may choose the less risky route of expanding an existing product line that uses known technologies and sells in known markets. Although such a conservative strategy rarely produces a big winner, it reduces the chance of a firm-threatening, manager-threatening failure. Forgoing potentially very profitable projects reduces the expected wealth of stockholders but enhances the expected wealth of managers.

Managers may also view acquisitions that broaden a firm's product lines or expand into other industries as reducing their exposure to industryor market-specific risk. Poor performance in one division may be offset to some degree by superior performance elsewhere in a diversified firm. If these offsetting effects reduce the variability in the firm's cash flows, they can reduce the likelihood of job loss. Because stockholders can diversify their own portfolios easily and at low cost, however, they have little need for corporate diversification. Recent empirical evidence for the U.S. market indicates that the returns to stockholders of diversified corporations lag those of undiversified firms in the same industry and that stockholder returns decrease as firms become increasingly diversified (see Lang and Stulz 1994; Comment and Jarrell 1994; and Berger and Ofek 1994). These findings indicate that managers, because they have the most to gain from corporate diversification, are probably making self-serving investment decisions at the expense of stockholders.

Managers can also use financial policy to influence the variability of corporate cash flows and the likelihood of corporate financial distress. Because leverage magnifies fluctuations in operating performance, managers are likely to prefer less leverage than stockholders prefer. For managers, the costs of debt financing (e.g., a higher probability of bankruptcy) outweigh the benefits (e.g., larger cash flows from interest tax shields and lower financing costs) at lower levels of debt than preferred by stockholders.

Finally, the managers of a profitable mature firm can choose a strategy of low dividend payouts

that allows the firm to finance growth using only internally generated funds. Such a policy can not only help keep leverage low but can also benefit the managers by enabling them to avoid the external scrutiny associated with security issuance—disclosures to the U.S. SEC, rating-agency investigations, and direct monitoring by lenders (see Easterbrook 1984).

The Asset Use Problem. Agency costs can result from the misuse or personal consumption of corporate assets by managers. Perks such as company cars, club memberships, or a plush working environment can help firms attract and retain talented managers. If carried too far, however, perk consumption can destroy stockholder value as corporate assets shift from productive to unproductive uses. Because the typical manager bears only a fraction of the cost of such expenditures but reaps all of the benefits, managers have strong incentives to spend more on perks than stockholders would like.

Managers may also have incentives to make unprofitable investments to increase the size of the firm, thereby increasing their compensation and/or prestige. Evidence from studies of CEO compensation in U.S. corporations, such as Murphy (1985), is consistent with such incentives. These studies found that firm size, as proxied by sales, explains a larger percentage of the cross-sectional variation in the total compensation of senior executives than firm performance explains. In a related argument, Shleifer and Vishny (1989) proposed that managers may actually choose investments that are well suited to their skills as a means of increasing the cost of replacing them.

A manager can fund investment with internally or externally generated funds. External financing has distinct disadvantages for managers because it subjects them to scrutiny by capital market participants and, if debt is used, increases the likelihood of financial distress. Jensen (1986) argued that the potential for overinvestment by managers is particularly acute when managers have access to excess free cash flow, which Jensen defined as internally generated cash flow in excess of that needed to fund all of the firm's available projects with positive net present values. Jensen noted that the kinds of firms most likely to generate excess free cash flow are profitable firms with limited growth opportunities. As an example of the problem, Jensen pointed to the oil industry during the late 1970s and early 1980s. Rather than distributing the excess cash to stockholders, Exxon put together an office products subsidiary and Mobil bought the Montgomery Ward retail store chain.

These excursions into non-oil markets were failures that cost Exxon and Mobil stockholders hundreds of millions of dollars. Kaplan (1989) found evidence consistent with overinvestment in capital expenditures at firms preceding management buyouts. Servaes (1994), however, in a study of U.S. firms that were taken over or went private, found evidence of overinvestment only among oil and gas firms. But Servaes was careful to note that he examined only capital expenditures and that the firms he examined could have been overinvesting in acquisitions, current assets, or employees.

Controls on Agency Costs

Various mechanisms exist that either help align the incentives of managers with those of stockholders or limit the agency costs that managers can generate. We provide a brief description of the mechanisms in Exhibit 2 and discuss the empirical evidence about their effectiveness in the following sections. Readers should keep in mind that firms use the individual mechanisms in various combinations to control agency problems that are unique to those individual firms (Agrawal and Knoeber 1996).

Stock Ownership. Increasing the amount of stock owned by managers is the most direct

method of aligning the interests of managers with those of stockholders. A manager who owns a large fraction of the firm's shares bears the consequences and reaps the rewards of managerial actions that destroy and create value. Managers with large stockholdings are likely to work harder, have longer investment horizons, and make better investment decisions than managers who own relatively little stock.

A number of empirical studies of U.S. corporations document a positive relationship between managerial stock ownership and firm performance. However, the relationship is not monotonic (see, e.g., Morck, Schliefer, and Vishny 1988a; Hermalin and Weisbach 1991; and McConnell and Servaes 1990). Stulz (1988) showed that moderately high levels of stock ownership by managers can accentuate conflicts between stockholders and managers by enabling managers to insulate themselves from the firm's monitoring and governance mechanisms and from external disciplinary forces, such as the takeover market.

Kaplan (1989) and Smith (1990) reported direct evidence of the incentive effects of large stockholdings on operational efficiency. They documented how the same managers operate firms under differ-

Conclusions

EXHIBIT 2.	Mechanisms	mat	wiitigate	Agency	Problems
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Stock ownership	Managerial ownership of a firm's stock helps align the interests of managers with those of stockholders by increasing the costs to managers of shirking or excessive asset use. It also helps attenuate the horizon problem if share prices quickly adjust to reflect changes in corporate value. Large stock ownership by managers can create problems, however, if managers use the control to block beneficial takeovers or to dominate the selection of directors.
Compensation	Periodic performance reviews and incentive compensation in the form of accounting-based bonuses, stock option grants, stock appreciation rights, or restricted stock can alleviate a variety of agency conflicts. Stock options are especially useful for shifting the risk preferences of managers toward those of stockholders.
The board of directors	A strong, independent board can limit the divergence of managers from shareholder wealth maximization by closely monitoring major managerial decisions and rewarding (disciplining) desirable (undesirable) decisions.
The managerial labor market	Effective managers tend to have more career opportunities (as corporate executives or board members) and more potential for higher compensation than ineffective managers, which creates an incentive for managers to increase stockholder value and limit self-serving behavior.
The market for corporate control	Poor decisions that reduce share value attract bidders and increase the likelihood that the manager will be dismissed following an acquisition. This control is less effective when managers control large blocks of the firm's stock.
Blockholders and activist investors	Owners of large blocks of stock have greater incentive than small stockholders to monitor the activities of managers.
Debt and dividends	An increase in leverage increases the likelihood of financial distress, which increases the cost to managers of inefficient decisions. Debt service forces managers to distribute cash rather than invest it in value-reducing investments. Dividend distributions also reduce internal funds; if the firm is thus forced to finance growth with external funds, it will be subject to greater scrutiny by capital market participants.

ent incentive structures by examining firm performance before and after management buyouts. Kaplan and Smith both found significant increases in operating performance following management buyouts. Smith noted that the improved performance in her sample is not attributable to reductions in discretionary expenditures, such as R&D, advertising, or maintenance spending. She concluded that the improvements are caused, instead, by increased operational efficiency resulting from improved managerial incentives.

Agrawal and Mandelker (1987) and Schooley and Barney (1994) reported evidence that managerial stockholdings also affect capital structure and dividend decisions. Agrawal and Mandelker reported that managers of firms where debt levels are increasing tend to own more stock than managers of firms where debt levels are decreasing. This evidence suggests that greater stockholdings mitigate the differential risk preference problem. Schooley and Barney found evidence that large stockholdings increase the incentives of managers to distribute, rather than invest, excess cash. They found higher payout ratios at firms where the CEO owned more than 14.9 percent of the firm's shares.

Compensation. Compensation contracts are a crucial mechanism for aligning the interests of managers and stockholders. An effective compensation contract will provide managers with incentives, at the lowest possible cost to the stockholders, to make the decisions that stockholders would prefer them to make. Effective contracts are especially important in firms where managers make a lot of decisions that cannot be easily monitored by the board of directors or investors. For example, monitoring the identification and development of new products or markets is inherently more difficult than monitoring the management of projects that are already in place. Managers of rapidly growing firms tend to have more opportunities to make poor decisions or to take self-serving actions than do managers of mature firms. A lack of timely, reliable information makes evaluating the quality of managerial decisions in growing firms difficult.

Ultimately, the challenge in designing executive compensation contracts is setting the compensation just high enough to attract and retain talented managers while providing incentives for managers to make decisions that create value for stockholders. As Baker, Jensen, and Murphy (1988) noted, the level of pay determines where managers work but the structure of the compensation package determines how hard they work.

We discuss the three major components of

compensation plans that can be used to mitigate agency problems—salary, accounting-based bonus plans, and stock options and restricted stock grants—in the following sections.

Salary. In theory, salaries can be set in a way that provides managers with incentives to create value. Periodic performance reviews resulting in merit-based pay raises, promotions, demotions, and outright dismissal can be used to reward (punish) desirable (undesirable) performance. The empirical evidence suggests, however, that U.S. firms do not use salary mechanisms effectively. In a study of 7,629 performance ratings at two large U.S. manufacturing firms, Medoff and Abraham (1980) found that employees who are ranked lowest in performance receive salaries that are only 7.8 percent less than the salaries of employees in the same grade level whose performance is rated most highly. Moreover, although studies of senior executive turnover document a negative relationship between firm performance and the likelihood of turnover (see, for instance, Gilson 1989 and Jensen and Murphy 1990), Warner, Watts, and Wruck (1988) found that the probability of a senior manager being fired increases significantly only when a firm is in the lowest performance decile as measured by its stock return during the previous year. For such a firm, the likelihood of a senior executive being fired in a given year was found to be 6 percent, compared with 1.4 percent for firms in the highest performance decile. Despite this disparity in the likelihood of being fired, fewer than 1 in 16 managers of firms that performed exceptionally poorly were fired.

Baker et al. noted that a weak relationship between salary aspects and performance is not unusual. In examining the reasons, they found critics arguing that merit-pay systems

- focus too heavily on pay,
- are counterproductive, in that they can reduce the intrinsic rewards for doing a good job,
- cause workers to focus too narrowly on the task at hand, and
- harm employee morale.

A number of practical problems are associated with using merit-pay systems to reduce agency costs. First, identifying appropriate performance measures is difficult because stockholders rarely know in advance precisely what they want from a manager. Using the wrong performance metric can cause managers to focus their activities too narrowly or pursue counterproductive activities. Second, the *ex post* settling-up process inherent in merit reviews becomes less effective as managers near the end of their tenures with a firm. With young managers, for whom the present value of future

employment income is large, renegotiation may be an effective mechanism to mitigate both effort and horizon problems. But the control afforded by renegotiation is small in the case of older managers. Because older managers tend to be the more important decision makers, future salary changes provide little control for either the effort problem or the horizon problem, where such controls tend to be most valuable. Finally, because the present value of a fixed compensation stream depends heavily on corporate solvency, compensation packages composed largely of a fixed salary can aggravate the differential risk preference problem.

Accounting-based bonus plans. Tying compensation to accounting-based performance measures, such as growth in earnings per share, can help reduce agency costs. Under these plans, managers typically receive cash, stock, or a combination of cash and stock if the firm achieves prespecified performance targets. The period over which performance is measured can be as short as a single year but, in long-term U.S. performance plans, normally ranges from three to five years (Kole 1997). Banker, Lee, and Potter (1996) documented how accounting-based incentive plans can improve performance in a retail environment. In a study of 15 retail outlets, they found that sales increase when the plan is implemented and that the increase becomes larger over time.

Linking compensation to accounting-based performance measures can create incentives for managers to work hard, take a long-term perspective, increase leverage, and reduce overinvestment. If the accounting-based performance targets are more objective than the performance criteria used in merit-pay systems, accounting-based systems can be more effective. Moreover, unlike stock-price performance, which reflects the performance of the entire firm, accounting-based bonus plans can be designed to reward good performance at the division level or lower. These plans can thus provide lower-level managers and employees with strong incentives to increase stockholder wealth. The growing interest in value-based management programs stems, in part, from this benefit of accounting-based performance measures.

Accounting-based bonus plans are not without potential problems. First, because they are based on accounting numbers, the performance measures are subject to manipulation by managers (see Watts and Zimmerman 1986 for a review of the evidence on the manipulation of accounting numbers by managers). Second, as is the case with merit-pay systems, the selection of the appropriate performance measure may cause managers to focus their activities narrowly. For instance, compensating a

sales manager on the basis of revenue may prompt the manager to build sales at the expense of profits. Third, because accounting-based measures are backward looking, they are poor measures of the value created by new investments. This deficiency is particularly a problem in rapidly growing firms. Finally, if market capitalization equals the present value of the future cash flows to equity, accounting measures may simply be poor indicators of changes in stockholder value.

Stock options and restricted stock grants. Market-based compensation, such as stock options, stock appreciation rights, or restricted stock, can also help control many agency problems. Marketbased compensation helps with the effort and horizon problems because the market value of a firm's stock, and options on its stock, are positively related to the present value of the entire stream of cash flows the firm is expected to generate in the future. In addition, because the values of stock and related option claims increase with the variance of the underlying asset returns, market-based compensation can mitigate the differential risk preference problem. Mehran (1995) reported evidence that market-based compensation benefits stockholders of U.S. corporations. He documented a positive relationship between performance at manufacturing firms and the percentage of equitybased compensation received by managers.

Although market-based compensation packages generally appear to benefit stockholders, they can be harmful in certain situations. For instance, because the value of an option declines as dividends increase, options that are not adjusted for dividends can increase the incentives for managers to limit dividends. In addition, the use of unadjusted stock prices in determining a manager's compensation may introduce unwanted volatility in compensation. If the uncertainty concerning a manager's compensation is increased sufficiently, the manager may require a higher overall level of compensation.

Mehran found that firms in which a higher percentage of the shares are held by insiders or by outside blockholders use less equity-based compensation than other firms, which suggests that market-based compensation acts as a substitute for stock ownership in controlling agency costs. Interestingly, stock ownership and executive stock option grants may not produce the same shift in risk preferences. Tufano (1996) found that gold mining firms in which executives have larger stock holdings tend to carry out more hedging of gold prices than firms in which executives hold more options. That is, managers accept more risk, in the form of stock return variability, when they have

options (which tend to increase in value with added stock return variability) than when they own actual shares of stock.

The relative importance of accounting- and market-based compensation in compensation contracts has been found to depend on how well accounting returns and market prices measure firm-specific aspects of performance (Lambert and Larcker 1987; Sloan 1993; and Yermack 1995), the liquidity constraints faced by a firm (Yermack), and the growth opportunities available to a firm (Lambert and Larcker; Bushman, Indjejikian, and Smith 1996; and Baber, Janakiraman, and Kang 1996). Accounting-based bonus plans tend to be more important when market returns are relatively noisy; market-based compensation is more important when firms face liquidity constraints and have relatively large growth opportunities.

The Board of Directors. The board of directors is charged with representing stockholder interests. Fama and Jensen (1983) described the primary responsibilities of the corporate board in the United States as ratifying or approving major managerial decisions and monitoring the implementation of those decisions. The legal authority that a board has to hire and fire managers and to set their compensation provides it with the means to enforce its decisions. But a board may not always use its authority to advance stockholder interests. When the incentives of individual board members differ from those of the stockholders, a board may take actions that benefit directors at the expense of the stockholders.

A number of researchers have argued that the degree of alignment between board and stockholder incentives increases with the proportion of outside directors on the board. Weisbach (1988) noted that inside directors are less likely than outside directors to challenge a CEO because the CEO tends to have considerable influence over insiders' careers. Furthermore, inside directors, including the CEO, have incentives to protect above-market compensation or excess nonpecuniary benefits that they receive as managers.

In some cases, outside directors may not represent stockholder interests more diligently than inside directors. Mace (1986) and Lorsch and MacIver (1989) noted that CEOs of U.S. corporations often dominate the director-nomination process. If so, CEOs may nominate outside directors who are inclined to support the CEOs' decisions. Interlocking directorships can also reduce the independence of outside directors; fearing reprisal, an outside director may decide not to challenge a CEO if the CEO is on the board of the firm at which

the director is a senior executive. Finally, outside directors who are appointed because of their expertise in a narrow area may feel uncomfortable challenging a CEO on decisions outside that area of expertise.

Whether or not outside directors represent stockholder interests better than inside directors is ultimately an empirical question. Bhagat and Black (1997) found no evidence from U.S. data that the proportion of independent outside directors affects future firm performance. Evidence from a number of other studies, however, does suggest that outside directors better represent stockholder interests. For example, Rosenstein and Wyatt (1990), Hermalin and Weisbach (1988), and Mayers, Shivdasani, and Smith (1997) concluded that outside directors on U.S. corporate boards are appointed in the interests of stockholders. Rosenstein and Wyatt reported a positive and significant stock price reaction when an outsider is named to a board, an indication that the market expects stockholders to benefit from the appointment. Hermalin and Weisbach found an increase in outside-director appointments, relative to appointments of insiders, after a firm has performed poorly, which suggests that outside directors are perceived as more likely than inside directors to enact changes to improve firm performance. Mayers et al. found that life insurance firms that change from stock to mutual ownership increase the percentage of outside directors on their boards and that property/casualty firms that switch from mutual to stock ownership reduce that percentage. Mayers et al. also found that boards of insurance firms with mutual ownership tend to have a larger percentage of outside directors than firms with stock ownership and that, among the mutual firms, costs tend to be lower when there are more outside directors. They suggested that monitoring by outside directors compensates for the lack of a credible external monitoring mechanism at mutual firms.

The evidence from studies of stock-price reactions to board decisions indicates that the U.S. market tends to view decisions by outsider-dominated boards more favorably than similar decisions by insider-dominated boards. The market appears skeptical that insider-controlled boards are acting in stockholder interests. Byrd and Hickman (1992) found that abnormal bidder returns around takeover bid announcements are significantly higher when the board's decision is likely to have been made by outside rather than inside directors. Similar results have been reported for management buyouts (Lee, Rosenstein, Rangan, and Davidson 1992) and the adoption of poison pills (Brickley, Coles, and Terry 1994). Lee et al. and Brickley et al.

found that abnormal returns in these situations are significantly higher when outside directors have voting control of the board.

Finally, other studies suggest that the proportion of outside directors is positively related to the use of incentive compensation and that outside directors are more likely to take decisive actions to replace a poorly performing CEO. Mehran found that in the United States, equity-based compensation is used more extensively in firms with more outside directors; Weisbach (1988) found that CEOs are more likely to be removed following poor performance if outside directors have voting control. Furthermore, Borokhovich, Parrino, and Trapani (1996) reported evidence that outside directors are also more likely than inside directors to replace a poorly performing CEO with an executive from outside the firm. This finding suggests that outside directors are willing to support a significant change in the policies of the firm when necessary.

The Managerial Labor Market. Fama (1980) described how the managerial labor market can help control agency costs through a process of "ex post settling up" with a manager for his or her past performance. Fama argued that if current performance affects a manager's future job opportunities, the manager has an incentive to refrain from pursuing excessive self-serving behavior at the expense of stockholders. Fama and Jensen (1983) applied this notion to the labor market for outside directors. They argued that the more outside directors are concerned about their reputations in the labor market (because they want a more prestigious position as a manager at another firm or would like more directorships), the more vigilant they will be in their monitoring activities.

Gilson (1989) and Cannella, Fraser, and Lee (1995) reported evidence consistent with Fama's idea that external labor markets use information on past performance to set wages and define alternative job opportunities for executives. Gilson found that managers who resign from financially distressed public firms rarely find employment at other exchange-listed firms. Canella et al. reported similar evidence for managers of failed Texas banks. They also found evidence that the labor market distinguishes between managers who lose their positions for reasons beyond their control and managers directly associated with the bank failure.

Gilson (1990) and Kaplan and Reishus (1990) reported evidence consistent with the theory proposed by Fama and Jensen. Gilson found that decisions made by outside directors can affect their reputations in the labor market: Directors who

resign from boards of financially distressed firms subsequently hold about one-third fewer seats on the boards of other firms. Kaplan and Reishus also reported evidence that a manager's performance also affects his or her reputation in the market for corporate directors. They found that executives of firms that reduce their dividends are less likely to subsequently become outside directors at other firms than managers at firms that do not reduce their dividends. One interpretation of this evidence is that managers of firms that reduce their dividends are not often invited to join other boards because they are perceived as poor managers.

The Market for Corporate Control. Several theories argue that takeovers, or the "market for corporate control," help mitigate agency conflicts when the internal governance structures of corporations fail (Marris 1963 and Jensen 1986). These theories are based on the premise that market values incorporate anticipated agency costs; a firm's share price declines as investors see or foresee managers making poor strategic decisions, managing assets inefficiently, or using corporate resources in nonproductive ways. A fall in market value attracts the attention of potential bidders, who believe they can realize profits by buying the firm and changing its strategies, improving its operational efficiency, or eliminating wasteful activities.

A number of studies provide empirical evidence from the U.S. market consistent with the idea that takeovers enhance the efficiency of target firms. We focus on the studies of tender offers because they include disciplinary takeovers—the hostile transactions associated with disposing of inefficient incumbent managers. From 1976 through 1990, the average premium paid by acquirers in mergers and acquisitions was 41 percent of the preacquisition value of the target firm. Jensen (1993) estimated that the sum of these premiums represents \$750 billion in gains to targetfirm stockholders. Rational bidders would offer such large bid premiums only if they foresaw making operational improvements at least equal to that amount. Martin and McConnell (1991) found that CEO turnover in target firms increases after a takeover. The increase is particularly high for target firms with poor pretakeover performance. Martin and McConnell's results are consistent with the proposition that the takeover market disciplines poor managers.

Healy, Palepu, and Ruback (1992) found that corporate performance improves after mergers. Moreover, this performance is not the result of reductions in long-term investments in R&D or capital expenditures.

Morck, Shliefer, and Vishny (1988b) showed that targets of hostile tender offers come from industries in decline or facing severe changes. They suggested that tender offers occur when target firms do not respond quickly to those external forces.

Jensen (1986) cited firms in the oil industry as an example. As profitable investment opportunities declined in the early to mid-1980s, many oil firms continued expensive active exploration programs or made investments outside the oil industry. Jensen suggested that corporate managers have strong incentives not to shrink their firms. They want to maintain their span of control, their pay may be tied to size, and they do not want to preside over a period of dismissals and wage cuts. Managers thus resist adapting to competitive forces that call for contraction or exit. For many firms in contracting industries, only external forces are sufficient to overcome these biases. An outsider without links to the firm can institute changes that would be difficult or impossible for insiders to implement. Thus, takeovers help reduce the inertia against necessary organizational change.

Stulz showed that even the power of the market for corporate control is limited. When incumbent managers own a significant stake in the firm, the threat of takeover is small. Also, the existence of a large voting block that will be against a takeover prevents bidders from acquiring a controlling interest. Thus, a large managerial blockholding can immunize even a poorly performing firm from the discipline of the takeover market.

Other potential deterrents to the corrective actions of takeovers are the various antitakeover mechanisms. Comment and Schwert (1995) estimated that 87 percent of U.S. exchange-listed firms have some type of antitakeover measure, such as fair-price amendments and poison pills. Comment and Schwert presented evidence that antitakeover amendments do not deter takeovers; instead, they are associated with higher takeover premiums. Coffee (1991) and Pound (1992) argued, however, that antitakeover mechanisms create formidable barriers to takeover activity and thereby protect inefficient managers from the threat of takeover.

Scherer (1988) used line-of-business data to examine 95 tender offers in the United States and found that targets slightly underperform other firms. He found no evidence of improved performance after the completion of a takeover. Because takeovers are disruptive and expensive but do not produce operational benefits, he questioned whether the takeover market is the most efficient way to correct internal governance flaws.

Large Blockholders and Activist Investors.

Economic theory suggests that stockholders monitor corporate managers less than is optimal (Shleifer and Vishny 1986). One reason may be that an individual who monitors managers absorbs all the costs of that activity but reaps benefits only in proportion to his or her ownership stake. Because monitoring benefits are shared among all stockholders on a pro rata basis, stockholders with small ownership interests have an incentive to delay monitoring in the hope that some other stockholder will make the monitoring investment. This free-rider problem means that less monitoring occurs than would occur if mechanisms existed to coordinate stockholder activities.

The free-rider incentive affects owners of large blocks of stock less than those with small stockholdings. A large blockholder gains a larger proportion of the benefits of monitoring, so the benefits are likely to exceed the costs for such owners. Moreover, large blockholders are often professional investors—managers of pension funds or institutional investors—who may have expertise in evaluating corporate performance, so their monitoring costs will be lower than those of less skilled stockholders. Thus, the presence of a large blockholder should increase the likelihood of monitoring, which should decrease agency costs and increase firm value.

Increased stockholder activism, particularly on the part of several state pension funds, and the relaxation of rules prohibiting communication among investors about corporate challenges have accentuated the disciplinary effect large blockholders can have. The widespread adoption in the United States of antitakeover measures and state antitakeover laws, combined with a reduction in the availability of high-yield financing in the late 1980s, largely eliminated the takeover market as an effective mechanism to impose discipline on managers. To fill this void, some institutional investors began asking the managers of poorly performing firms how they proposed to improve their firms' performance.

Stockholder activism occurs when, for various reasons, institutions are reluctant to simply sell their shares in underperforming firms. Some institutional investors have such large holdings that selling without creating downward price pressure is difficult. Institutions that follow an indexing investment strategy have limited latitude in their holdings of the largest 100–200 firms. Therefore, their only recourse is to pressure incumbent managers to improve performance. The tactics of activist institutional investors vary from writing a letter of concern to the board to publicizing the poor

performers to initiating stockholder proposals.

The empirical evidence on the effect of large blockholders and institutional investors on corporate value (and, by implication, the effectiveness of their monitoring) is mixed. Several studies using U.S. data from the late 1970s and early 1980s have documented an association between the formation of large blocks of stock and positive stock-price reaction. The presumed connection is that a large block can be used as a toehold in a takeover attempt or to encourage managers to increase efficiency (Holderness and Sheehan 1985 and Mikkelson and Ruback 1985). Shome and Singh (1995) found a positive stock-price reaction to the formation of large blocks of stock by institutional investors but only weak improvements in operating ratios. They concluded that the stock-price gains probably arise from sources other than institutional monitoring of managers. Bethel, Liebeskind, and Opler (1997) examined block share purchases and found that when activist investors purchase the blocks, observable changes occur in firms' behavior, notably, a rise in divestitures and fall in mergers. They concluded that activist blockholders benefit stockholders by reducing the likelihood that corporate managers will make value-decreasing decisions.

Several studies have found positive stockprice responses to the negotiation of agreements between U.S. firms and large institutional investors (Smith 1996 and Strickland, Wiles, and Zenner 1996). Opler and Sokobin (1997) found improved stock market and operating performance after firms appeared on the Council of Institutional Investors focus list—a list of underperforming firms. Nesbitt (1994), examining the long-term return to stockholders of firms targeted as underperformers by CalPERS (California Public Employees' Retirement System), reported that, for the five vears prior to being targeted, these firms underperformed the S&P 500 Index by almost 8 percent a year. For the five years after being targeted, the same firms had annual stockholder returns 7.2 percent above returns of the S&P 500. Huson (1997) found that the restructuring activity at firms targeted by CalPERS is greater than at similar firms. Furthermore, restructuring announcements following CalPERS targeting tend to be associated with more-positive stock-price reactions than announcements prior to targeting. On the other hand, Karpoff, Malatesta, and Walkling (1996) found no evidence of performance improvements after a firm received a stockholder proposal sponsored by an institutional investor. Similarly, Wahal (1996) and Gillan and Starks (1997) found that institutional targeting of poorly performing firms results in only slight short-term benefits and no long-term gains to stockholders.

The identity of the large blockholder may affect the holder's incentives to monitor. Brickley, Lease, and Smith (1988) and Borokhovich, Brunarski, and Parrino (1997) described evidence that blockholders with business ties to the firm may be less effective monitors than blockholders without such ties. Woidtke (1996) found a positive relationship between institutional ownership and corporate value for private U.S. pension funds but a negative relationship for public pension funds, particularly those that actively target poorly performing firms. She attributed this difference to public pension funds being concerned about political issues rather than strictly financial performance.

Unfortunately, the evidence from studies of the benefits from monitoring by large blockholders is mixed. How the presence of a large blockholder may affect a firm's future performance is not known, and no obvious uniform benefits to stockholders appear to come from institutional ownership and activism.

Debt and Dividends. As quasi-fixed-income claimants, managers prefer low leverage and low dividends. All else being equal, less debt lowers the chance of financial distress and concomitant job loss, and lower dividends imply greater retained earnings and higher cash reserves to buffer downturns. Several authors (Jensen 1986; Easterbrook; and Rozeff 1982) have argued that high levels of debt and dividends reduce agency costs. The fixed payments of corporate debt force managers to disgorge funds that might have been misused. Dividends also send cash out of the firm, but they provide a weaker mechanism than debt payments for limiting the cash available to managers because dividend payments are not subject to the same legal obligation as debt service. Additional debt also increases managers' exposure to market forces. In a debt-free or low-debt firm, sloppy management may reduce stockholder returns but not threaten managers' well-being. When debt levels are high, mediocre leadership, and the corresponding low profits and cash flows, can lead to negative comments by rating agencies and even default. Such events alert stockholders to the poor performance of managers. In extreme cases, financial distress allows creditors to replace managers.

Dividend payouts increase the probability that a growing firm will issue new securities and, through the issuance process, undergo the scrutiny of investment bankers and potential investors. If underwriters or investors find managerial inefficiencies as they evaluate a new security issue, they assign it a lower price or quality rating. The rating acts as a report card for the firm's management and alerts investors to potential problems.

Global Variations in Conflicts

So far, the discussion has been directed to the empirical evidence on the various mechanisms for controlling stockholder–manager conflicts in U.S. firms because relatively little empirical research has focused on agency problems in non-U.S. countries. Investors should note, however, that agency costs and the effectiveness of mechanisms for controlling agency conflicts vary among countries because of diverse customs and laws.

Although the creation of stockholder value is the principal objective of most U.S. corporations, in other countries, such as Germany, corporations are viewed as institutions that benefit the interests of a broad set of stakeholders. In those countries, pressure on managers to satisfy multiple constituencies—including employees, creditors, and suppliers—causes stockholder—manager problems to differ from those in the United States. This section compares governance systems in the United States and Germany to illustrate national variations in the effectiveness of mechanisms for controlling agency problems.

Incentive Compensation. Incentive compensation tends to be a less important component of total compensation in Germany than in the United States. A study by Waadt, Bruns, and Fakler (1996) revealed that, although approximately 50 percent of managers at medium-sized (500–1,500 employees) German firms receive performance-related payments, the variable component generally accounts for less than 15 percent of their total compensation. In contrast, Cavanagh (1996) reported that the percentage of medium and large public U.S. firms that reported having an annual bonus plan for senior managers in 1995 ranged from 80 percent for retail trade firms to 100 percent for communications, construction, financial services, and energy firms. The annual bonus received by the typical senior manager at these firms was worth more than 50 percent of his or her annual salary. Furthermore, many senior U.S. managers receive even greater amounts of incentive compensation in the form of option grants. We examined 544 proxy statements for firms with CEOs listed in the 1994 Forbes compensation survey and found that 66.5 percent of the CEOs of these firms received option grants during 1993. For the median CEO, the option grant had a value of \$732,400 and represented 114 percent of salary, or 72 percent of the CEO's total salary, bonus, and other compensation.

The limited use of incentive compensation in Germany increases the relative importance of other mechanisms for controlling stockholder–manager conflicts there. The less other mechanisms compensate for the limited use of incentive compensation in Germany, the more severe these conflicts are likely to be.

The Board of Directors. The role and composition of corporate boards of directors in Germany are different from those in the United States. German boards have a legal mandate to represent the interests of employees as well as stockholders. The board of a German firm is typically composed of stockholder and employee representatives. For example, under the German codetermination law, for a corporation with more than 2,000 employees, the board must have an equal number of stockholder and employee representatives. Furthermore, depending on the size of the firm and the board, two or three of the employee representatives must be union members, who may or may not be employees of the firm.¹ The mandate to represent multiple stakeholders can cause a German board to deviate from a policy of maximizing stockholder value. As Roe (1993) suggested, stockholders may actually want the board to monitor less than it otherwise would for fear that the board will pressure managers to take actions that benefit employees but reduce stockholder value.

Although requiring firms to put employee representatives on corporate boards may reduce a board's oversight of management, some proponents of the German system maintain that the requirement can actually enhance stockholder value. They argue that, in the long run, employee representation on the board reduces contracting costs with employees and other stakeholders (Porter 1992). Kaplan (1994), in a study of top-executive turnover at German firms, found that the likelihood of turnover is negatively related to stock returns and earnings. This evidence suggests that German boards do consider stock performance in the decision to replace a CEO. The importance of the role stock returns play in this decision, however, is not clear. Whether German boards represent stockholder interests more or less effectively than U.S. boards is still unknown.

Large Blockholders and Activist Investors.

Equity ownership of German corporations is considerably more concentrated than ownership of U.S. corporations. Franks and Mayer (1994) reported that approximately 85 percent of German public corporations have a nonbank investor who

holds more than 25 percent of the firm's equity. Prowse (1994) reported average ownership concentrations (percentage of shares outstanding owned by the five largest stockholders) in nonfinancial corporations of 25.4 percent (median 20.9 percent) for the United States and 41.5 percent (median 37.0 percent) for Germany. The relatively high concentration in Germany suggests that monitoring by blockholders is potentially a more important mechanism for controlling agency problems there than in the United States.

Concentration of voting power among banks, however, potentially reduces the effectiveness of blockholder monitoring in Germany. As Table 1 shows, German banks directly own 10 percent of all public German equity and control additional voting rights through proxy votes of shares held for individual investors and controlling positions in

Table 1. Equity Ownership Distribution in the United States and Germany

Investor Group	United States	Germany	
Private investors	49%	17%	
Nonfinancial institutions	5	39	
Foreign investors	5	12	
Government	0	4	
Institutional investors	41	28	
Banks	0	10	
Insurance firms	4	7	
Investment funds	11	8	
Pension funds	26	3	
Total	100%	100%	

Sources: Deutsche Bundesbank (1994); Prowse (1994); Blair (1995); Franks and Mayer (1994); Organization for Economic Cooperation and Development (1995); Hauck (1994).

investment firms (see Franks and Mayer). German banks thus have considerable influence on corporate boards. A 1990 investigative report by the Monopoly Commission of the German Parliament found that banks used the votes that they controlled to elect bank nominees to the board in 96 of the 100 largest German firms. In 14 firms, the chair of the board was a banker (Deutscher Bundestag 1990).

At least two fundamental conflicts of interest are inherent in a system in which banks do business with a firm in which they have an equity interest. First, banks may find supporting management-initiated projects that decrease stockholder value in their best interests if opposing such projects endangers business relationships with the firm. Second, to the extent that the value of outstanding loans to a firm is large relative to the bank's equity holdings, banks have incentives to use their voting

rights to protect their debt positions at the expense of other stockholders. This point is of concern because German firms rely heavily on bank financing. Prowse reported that bank loans in 1985 represented more than 80 percent of German corporate debt. In contrast, bank debt represented less than 50 percent of corporate debt in the United States in the same year.

Despite the potential conflicts of interest, the evidence suggests that, on balance, German banks are concerned with stockholder value. Gorton and Schmid (1996) found that banks with blockholdings, like other blockholders, had a positive impact on performance in 1985. Cable (1984) showed that profitability among large German firms is positively related to the proportion of equity voting rights controlled by the three big money center banks (Deutsche, Dresdner, and Commerzbank) and to bank representation on the firms' boards.

The Market for Corporate Control. Although monitoring by large blockholders is a relatively more important means of controlling agency costs in Germany than in the United States, the takeover market is relatively less effective at disciplining German managers. Few successful hostile takeovers have occurred in Germany since World War II (Franks and Mayer). Even friendly mergers are considerably less common than in the United States, as Table 2 shows.

Table 2. Average Annual Volume of Completed Merger and Acquisition Transactions, 1985–89

Characteristic	United States	Germany \$4.2
Volume (billions)	\$1,070	
Share of total market capitalization	41.1%	2.3%

There are several possible explanations for the limited takeover activity in Germany. First, as illustrated by the hostile takeover bid by Krupp–Hoesch for Thyssen in early 1997, employee representatives on the board are likely to support incumbent managers when jobs are threatened by a takeover. Second, a relatively common practice in Germany is for stockholders to pass a resolution restricting the voting rights of individual stockholders, regardless of the number of shares a stockholder owns, to between 5 percent and 15 percent (Franks and Mayer). Although the bidder in a takeover contest can overcome this restriction by convincing the small stockholders to rescind it, such a move can be costly and time consuming.

The final, and perhaps most important, impediment to disciplinary takeovers is the large ownership stakes of many German banks. Bank representatives have incentives to use their board positions and their equity voting power to defeat takeover attempts that pose a threat to their other business relationships with the firm. Although bankers who serve on U.S. boards face the same potential conflict of interest, they tend to have considerably less voting power than in Germany because U.S. banks are forbidden to directly own equity by the Glass–Steagall Act.

Implications for Firm Value

Based on our discussion of the four problems that arise because of imperfect contracting between stockholders and managers—the effort, horizon, differential risk preference, and asset use problems—and the variety of mechanisms designed to mitigate these problems, we can conclude that the likelihood that managers will not work diligently to add to stockholder wealth increases when managers

- own little or no stock in the firm,
- are not compensated based on either stock or accounting performance, and
- have access to large amounts of internally generated funds.

Moreover, agency problems tend to increase as managers approach retirement; counteracting the various temptations of a short horizon is difficult.

Without effective mechanisms for controlling stockholder–manager conflicts, investors must rely on managers to make the "right" decisions on their own. Moreover, even firms in which the executives have no intention of doing anything that the stockholders would not want them to do can benefit from a well-designed set of control mechanisms. These mechanisms signal to the market that managers will not stray too far from the objective of stockholder wealth creation. Such signaling can benefit stockholders by reducing the discount that investors factor into the stock price to reflect the potential for such behavior.

Control mechanisms are often substitutable. High leverage or a high dividend payout may provide the same incentives in some firms that high managerial stock ownership provides in other firms. Choosing the appropriate portfolio of control mechanisms requires considering the implications of the firm's characteristics for potential agency costs. For example, in growing firms, equity-based compensation probably provides a more appropriate means of controlling stockholder–manager conflicts than does high leverage. In mature firms in stable markets, debt may be an ideal mechanism for controlling these conflicts.

Compensation plays a major role in aligning the incentives of managers with those of stockholders. Because managers work for and make decisions that affect stockholders, compensation schemes should reward managers when stockholders prosper and penalize managers when stockholders suffer. The challenge is ensuring that the compensation plan elicits the appropriate type of behavior from managers.

The evidence suggests that a board dominated by independent outside directors provides better monitoring during significant corporate events than do boards that are not dominated by independent outside directors. Thus, firms actively pursuing acquisition and divestiture strategies should have independent boards.

Firms in highly profitable but mature markets, such as markets in which strong brand names prevail or in which entry is difficult, are especially susceptible to agency problems. Because the cash flow generated by such firms can exceed their investment needs, the potential arises for managers to make investments that benefit them at the expense of stockholders. Monitoring and control mechanisms designed to counter the incentives of managers to overinvest are important at such firms.

Firms in fast-growing industries also present special problems for investors. Information with which to evaluate managerial performance in such firms can be difficult to obtain; it may not exist, may be highly proprietary, or if it exists, may not be timely. Compensation contracts that provide managers with incentives to make the best investment decisions on their own are especially important in such an environment.

Investors must also be concerned about global variations in the importance of various types of agency problems and the effectiveness of the various mechanisms for controlling them. The comparison of selected U.S. and German governance characteristics illustrates this point. Other countries have still other types of agency problems—for example, France has its large number of quasistate-owned enterprises, and Japan has its keiretsu. When evaluating the potential magnitude of agency problems at firms in other countries, investors must consider three factors: the customs and laws in the particular country in which the firm is domiciled, the likely problems at a particular firm, and the effectiveness of the mechanisms at that particular firm.

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Note

 For firms with 500-2,000 employees, one-third of the directors are elected by employees. The detailed rules of the election of employee representatives are described in the German codetermination law, $MitbestG\ \S6-24$.

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