

# Department of Finance

## Working Paper Series 1998

---

**FIN-98-045**

---

### **Corporate Governance and Board Effectiveness**

*Kose John, Lemma W Senbet*

October 1997

**This working paper series has been generously supported by a grant from**

**CDC Investment Management Corporation**



# **CORPORATE GOVERNANCE AND BOARD EFFECTIVENESS**

by

**Kose John and Lemma W. Senbet\***

Revised  
October 1997

---

\*John is Charles William Gerstenberg Professor of Banking and Finance at Stern School of Business, New York University, and Senbet is the William E. Mayer Professor of Finance at Maryland Business School, University of Maryland. Part of this research was done while Senbet was Visiting Scholar at the International Monetary Fund. We acknowledge helpful comments from Edward Altman, N.K. Chidambaran, Simi Kedia, Anthony Saunders, Georgio Szego, Ingo Walter, and David Yermack. We also thank Sandeep Dahiya and Anurag Gupta for research assistance.

For comments and communication:

Kose John: Tel (212)998-0337, e-mail: [kjohn@stern.nyu.edu](mailto:kjohn@stern.nyu.edu)  
and

Lemma Senbet: Tel (301)405-2242; e-mail: [lsenbet@mbs.umd.edu](mailto:lsenbet@mbs.umd.edu).



## **CORPORATE GOVERNANCE AND BOARD EFFECTIVENESS**

### **Abstract**

This paper surveys the empirical and theoretical literature on the mechanisms of corporate governance. We focus on the internal mechanisms of corporate governance (e.g., corporate board of directors) and their role in ameliorating various classes of agency problems arising from conflicts of interests between managers and equityholders, equityholders and creditors, and capital contributors and other stakeholders to the corporate firm. We also examine the substitution effect between internal mechanisms of corporate governance and external mechanisms, particularly markets for corporate control. Directions for future research are provided.

**JEL Classification: Corporate Finance and Governance (G30); Capital and Ownership Structure (G32)**



## **CORPORATE GOVERNANCE AND BOARD EFFECTIVENESS**

*"Efforts to reform company government have concentrated on making managers afraid. It is time now to make boards greedy" [The Economist, August 9, 1997]*

### **I. Introduction**

Corporate governance deals with mechanisms by which stakeholders of a corporation exercise control over corporate insiders and management such that their interests are protected. The stakeholders of a corporation include equityholders, creditors and other claimants who supply capital, as well as other stakeholders such as employees, consumers, suppliers, and the government. The professional managers, the entrepreneur, and other corporate insiders (we will refer to them collectively as managers), control the key decisions of the corporation. Given the separation of ownership and control (or stakeholding and management) that is endemic to a market economy, how the stakeholders control management is the subject of corporate governance.

Thus, the primary reason for corporate governance is the separation of ownership and control, and the agency problems it engenders. In section II, we describe the various types of agency problems caused by the separation of ownership and control. Since different types of capital contributors and other stakeholders have different types of pay-off structures from the firm, the conflicts of interest that develop and the agency problems they cause are different. In this survey, we will depart from convention and not simply view corporate governance mechanisms as a means to ameliorate managerial agency problems arising from conflict of

interest between managers and equityholders. We will examine the role of corporate governance mechanisms in dealing with other classes of agency problems.

The topic of corporate governance has attained enormous practical importance for at least three reasons. *First*, the efficiency of the existing governance mechanisms in advanced market economies has been the subject of debate. For example, Jensen (1989,1993) has argued that the internal mechanisms of corporate governance in the U.S. corporations have not performed their job. He has advocated a move from the current corporate form to a much more highly levered organization, similar to a leveraged buyout (LBO). On the other hand, legal scholars, including Easterbrook and Fischel (1991) and Romano (1993), view the U.S. mechanisms and the legal system in a favorable light. *Second*, there is an ongoing debate on the relative efficacy of the corporate governance systems in the U.S. and U.K. (typified by dispersed shareholdings and a prominent role for the secondary market trading of shares) *and* the corporate governance systems in Japan and Germany (typified by more concentrated shareholdings and a prominent role for banks). With the new and emerging market economies seeking to implement the "right" corporate governance, this debate has attracted serious attention from finance and legal scholars.

*Third*, there is an apparent departure of the current practice of corporate governance from the legal provisions which accord the board control over management. The basic principle of corporate governance is that the shareholders elect the board of directors who in turn select top management. The common practice, however, is for the board to be elected by the shareholders from the slate approved by the top management. The effect of such departures



in current practice on firm performance and proposals for reform of the corporate board have attracted recent attention from academics and practitioners.

The monitoring role of the board of directors is an important component of corporate governance and we will pay particular attention to it. The board of directors is presumed to carry out the monitoring function on behalf of shareholders, because the shareholders themselves would find it difficult to exercise control due to wide dispersion of ownership of common stock. This problem in monitoring is endemic to most large corporations with diffuse ownership, because an individual (atomistic) shareholder lacks sufficient stake in the firm to justify spending resources to closely monitor managers. This leads to a free rider problem, as shareholders, individually, attempt to *A free ride@* on others to monitor managers.

Thus, the board effectiveness in its monitoring function is determined by its *independence, size, and composition*. The bulk of the literature is empirical, which takes as given the current structure of board governance and studies its impact on firm performance. More recently, there is limited attention to *endogenizing* the structure and composition of the corporate boards as a part of optimal corporate governance mechanisms (e.g., Hermalin and Weisbach, 1997, Warther, 1993). This new strand of papers is primarily theoretical and exploits the gaming strategies between management and the board of directors in a setting of imperfect information. In addition, there are theoretical and empirical attempts to examine the interaction among different corporate governance mechanisms (e.g., Hirshleifer and Thakor (1994)).

It is our purpose to *synthesize* the literature focusing on the board composition

and independence, along with its interaction with both product and financial markets.<sup>1</sup> We will also provide some new perspectives, particularly on the linkage between corporate governance and *debt* markets. Thus, our approach takes the firm as a nexus of contacts and examines the role of primary stakeholders - shareholders, creditors, management, and even the government - in the governance scheme. (This perspective is detailed in section II). The manner in which debt interfaces corporate governance is derived from two sources: first, the extent of alignment of board (board independence) with shareholders will have an impact on debt agency, and hence on endogenization of board structure in efficient debt contracting. Second, in other systems, such as Japan and Germany, debtholders have a direct role through board membership and perform functions separate from large shareholders, since their payoff structure is different. Therefore, the dichotomy of *large shareholder versus large creditor* is an interesting aspect of governance scheme that has not been fully studied. For instance, what is the role of corporate governance in the efficient resolution of financial distress or private workouts and market mechanisms? Our subsidiary goal of the synthesis is, in fact, to provide avenues for *future research* along these lines.

The rest of the paper is organized as follows. In section II, we describe the various classes of agency problems that arise from the separation of ownership and control. This is in view of the fact that we take an agency perspective in approaching issues in corporate governance. In section III the empirical literature on the board of directors, its characteristics,

---

<sup>1</sup> For an interesting survey that pays special attention to the role of concentrated ownership, see Shleifer and Vishny (1997). Our survey, focuses on board effectiveness and its interface with external mechanisms of control and managerial incentive contracts. The survey also has considerable US orientation, although we will provide some discussion of comparative governance systems. In our research agenda, we will have a new perspective on the role of debt in corporate governance.

its size, and its composition on firm performance is surveyed. In section IV the theoretical literature endogenizing the structure of the board is discussed. The interaction among different mechanisms of corporate governance, and in particular that between the internal mechanisms and the external mechanisms of corporate control is surveyed in section V. New directions for further research are explored in section VI. Concluding remarks are in section VII.

## **II. Agency Problems and Corporate Governance**

We view corporate governance in the context of control mechanisms designed for efficient operation of a corporation on behalf of its stakeholders. The control mechanisms themselves are necessitated by separation of ownership and control that is endemic to a market economy. Thus, corporate governance is a means by which various stakeholders exert control over a corporation by exercising certain rights as established in the existing legal and regulatory frameworks as well as corporate bylaws.

To appreciate the role of corporate governance, let us begin by thinking about an idealized market system which supports the familiar framework of the Fisherian Separation Principle. Consider an economy with two classes of agents - consumers and producers. On the consumption side, consumer-investors make their decisions to maximize their utility through an appropriate allocation of their consumption over time and across commodities. On the production or real sector side, firms make investment decisions so as to satisfy individual consumption preferences. If this economy is devoid of capital markets with lending and borrowing opportunities, managers (separate from owners) have to infer the details of diverse

---

consumption preferences of individual investors, and hence it is impossible to achieve *unanimously* agreed upon decision criteria regarding investment and production. In the presence of well-functioning capital markets, on the other hand, investment and production decisions can be delegated to managers so as to maximize the wealth of firm owners (or firm-value). Capital market prices become sufficient signals for productive decisions, and consumption and production decisions are completely separable. The Fisherian Separation Principle is a basis for a market economy in which there is *separation* of ownership and control. It can also be shown that, under these idealized conditions, wealth (value) maximization is equivalent to social welfare maximization.

Thus, the key to a well-functioning economy is the existence of well functioning markets which play a vital role in allocating resources efficiently, whereby resources are channeled to most productive uses. Unfortunately, the real economy is not as idealized as the Fisherian form. It is characterized by imperfect information, agency conflicts , and a host of market imperfections, such as transactions costs, taxes, and regulatory and institutional impediments to the arbitrage process in capital markets. We take an *agency perspective* in discussing the issues and principles underlying corporate governance and board effectiveness. Indeed, the firm can be viewed as a nexus or network of contracts (Jensen and Meckling, 1976), implicit and explicit, among various parties or stakeholders, such as shareholders (equityholders), bondholders, employees, and the society at large. This is now a widely held view in finance.

**INSERT FIGURE I [The Firm as a Network of Contracts]**

The pay-off structure of the claims of different classes of stakeholders are different. The degree of alignment of interests with those of the agents in the firm who control the major decisions in the firm are also different. This gives rise to potential conflicts among the stakeholders, and these incentive conflicts have now come to be known as "agency (principal-agent) problems". Left alone, each class of stakeholders pursues its own interest which may be at the expense of other stakeholders. We can classify agency problems on the basis of conflicts among particular parties to the firm, such as conflicts between stockholders (principals) and management (agent) ("*managerial agency*" or "*managerialism*"), between stockholders (agents) and bondholders ("*debt agency*"), between the private sector (agent) and the public sector ("*social agency*"), and even between the agents of the public sector (e.g., regulators) and the rest of the society or taxpayers ("*political agency*"). [ See Barnea, Haugen and Senbet (1985) for more detailed classification and discussion of private agency problems, and John and Senbet (1996), for social agency problems]. Agency problems detract from efficient operation of an enterprise. Departures from efficient investment strategies are detrimental to economic growth and development. Thus, the economic and financial environment, that fosters efficient *corporate governance* and efficient contracting among parties with diverse interests, promotes efficient allocation of resources, and hence ultimately economic development.

Our focus is on private agency perspective of corporate governance. It may be useful to outline two classes of agency problems before we go into a full-fledged discussion of corporate governance. First, *managerialism* refers to self-serving behavior by managers. Ownership of the modern corporation, particularly in the United States, is widely diffused, with most large

corporations being owned by a large number of shareholders. But, under separation of ownership and control, the actual operations of the firm are conducted by managers who typically lack major stock ownership positions. The potential conflict arising between managers and owners manifests itself in several dimensions. The management-stockholder conflict leads to managerial propensity for: (1) expanding a span of control in the form of "empire building" at the expense of the capital contributors or owners, and, (2) for unduly conservative investments in the form of seeking safe (but inferior) projects to maintain the safety of wage compensation and their own tenure.

Second, *debt agency* arises, since the debt contract may give managers, working on behalf of owners (equityholders), to make investment and financing decisions sub-optimally by departing from the principle of value maximization. This happens when equityholders and creditors are *disjoint* classes of investors and that the primary concern then is to maximize equity value over the cash flows that arise in the non-bankrupt states of nature. We can explain the nature of debt agency through representation of partitioning of claims by debtholders and equityholders. See Figure II.

## FIGURE II [Payoffs to Capital Contributors and Society]

Suppose that the firm raises its funds from the owners (equityholders) and the remaining from debt financing borrowed at a fixed obligation. In the good states of nature, no matter how high the firm's cash flow earnings, the debt-holders still receive only their fixed pay-off.

Whereas, owners capture all the gains above the debt obligation. Thus, equity can be thought of as a *call option* granting the right to the holder to buy the assets of the firm at an exercise price equal to the debt obligation. In such a case, management, working in the best interests of existing shareholders, has an incentive to alter the riskiness of the firm's investment activities. Riskier investments, if successful, will benefit shareholders. But risky investments, that fail, will reduce the value of collateralization to debt-holders, with the resultant decline in the value of outstanding debt. Indeed, when the firm goes bankrupt, limited liability allows stockholders simply to walk away from it, shifting all the risk to creditors.

With rational expectations, though, the adverse consequences of debt agency are entirely borne by equityholders themselves through increased cost of debt financing. The firm must provide strong assurances to creditors (e. g., through bond indenture provisions) that investment policies will not be changed to their disadvantage, or it will have to commit contractually, *ex ante*, to high interest rates - high enough to compensate creditors against the possibility of adverse policy changes. However, the increased cost of debt financing is *time inconsistent* in terms of controlling the risk incentives of equityholders, since once the debt contract is in place (if at all!), equityholders would seek to engage in excessively high risk activities, *ex post*. Thus, projects that are otherwise profitable may be foregone in exchange for high risk but inferior counterparts, leading to economic inefficiency.

The economic inefficiency is characterized in Figure III where value, along the vertical axis, is depicted as a concave function of asset risk (variance of terminal cash flows), measured along the horizontal axis. This is just a stylization of an investment opportunity set that provides

a mapping of value and risk, with the possibility that excessive risk-taking engenders destruction of value at some point (i.e., beyond the point at which value is maximized). Indeed, pursuant to debt issuance, equityholders make investment decisions to maximize equity value or the value of the payoffs in non-bankrupt states. The point of equity value maximization lies on the *right* hand side of firm value maximization, and hence leading to an agency cost of risk shifting. In addition to this asset substitution problem, the existence of outstanding debt inhibits profitable investments or engenders "underinvestment" (Myers, 1977), since the benefits would enhance the safety to creditors at the expense of equityholders.

### **FIGURE III [Debt and Risk-Shifting]**

Thus, the existence of agency problems is potentially harmful to the owners of the firm and may lead to inefficiency and wealth destruction in an economy. It is in the best interest of owners to resort to *control mechanisms* that move the operation of the firm toward full efficiency of the Fisherian variety. The channels for efficiency gains are improved managerial performance and reduced cost of external capital resulting from appropriate control mechanisms. These control mechanisms should be built into the *corporate governance* system, contractual mechanisms, and markets for corporate control and takeovers. For instance, weak corporate governance makes it too costly to raise external capital and distorts investment decisions away from value maximization. (see, e.g., La Porta, Lopez-De-Silanes, Shleifer and Vishny (1997)). It is our purpose in this survey to focus on the internal mechanisms of corporate governance and



organizational design, while paying attention to how these mechanisms interface with external mechanisms, such as discipline coming from product and takeover markets.

### **III. Corporate Governance Functions of the Board of Directors**

The board of directors is central to corporate governance mechanisms in market economies. Along with external markets for corporate control and institutional and concentrated shareholdings, it is viewed as a primary means for shareholders to exercise control on top management. The existing literature, which is largely empirical, grapples mainly with the following issues: How effective is the board in performing its monitoring function? Does the board contribute to shareholder wealth? Are the board and corporate control mechanisms substitutes? Does board composition matter? How does the board interact with management?

This paper synthesizes the literature by way of giving answers to the above questions, but it also raises additional issues not considered in the existing literature.

#### **A. Monitoring Function and Board Objective**

The theoretical literature on the corporate board of directors is sparse. The papers in the area tend to model the board with a utility function significantly aligned with the interests of the shareholders in order to accomplish its monitoring function [e.g., Warther (1994) and Hirshleifer and Thakor (1994)]. The alignment between the shareholders and the board is presumed to be achieved by making the compensation of the board members sensitive to firm value. Another approach is to exploit the reputational concerns of the board members in the governance markets

for directors. Noe and Rebello (1996) take an exception to the role of reputation by questioning its strength in achieving the necessary alignment. They rely instead on the role of compensation of board members to achieve the efficient outcome. Their paper derives optimal bounds on board size. The related question of how the board composition is determined is addressed by Hermalin and Weisbach (1997). They model the utility of each board member separately and endogenously derive the intensity with which the monitoring is carried out.

The empirical literature provides substantial evidence that the boards play an important *monitoring* role. The literature has also uncovered a number of determinants of the *effectiveness* of the board. The effectiveness itself is based on some performance measures as well as the discipline brought on top management or chief executive officers. One measure of such disciplining is CEO turnover. On the other hand, performance measures are related to shareholder interests. Our discussion will consider these determinants as well as indicators of board effectiveness. Later in the paper, we will consider some new perspectives which allow for stakeholders beyond shareholders and management, and possible departures from board objective function which aligns it with shareholders.

## **B. Board Composition: Outside Directorship and Board Independence**

The standard view in empirical finance, and in practice, is that the degree of board *independence* is closely related to its *composition*. The board is presumed to be more independent as the number of outside directors increases proportionately. Indeed, corporate governance in America has increasingly shifted toward *independent* boards with a majority

of outside (independent) directors. Activist institutional investors, such as Calpers, have also continued to push for greater board independence by way of demanding a supermajority of outside directors. Bhagat and Black (1997) report that half of the 100 largest American public corporations surveyed in 1996 had only one or two inside directors. Likewise, the impact of board independence, and hence the effect of *outside* directorship on shareholder wealth and the discipline of CEO, has received ample attention in the empirical literature. Unfortunately, the available evidence has come up *mixed*, making it difficult to make firm conclusions on optimal board composition in policy debates. Below we survey the literature and present both sides of the debates.

### **1. Performance Effects: Shareholder Wealth and Cash Flow**

Rosenstein and Wyatt (1990) use the CRSP (financial data) and announcements of outside board appointments from the *Wall Street Journal* to measure the wealth effects of these announcements for the period 1980-1985. They find significant positive excess returns around the days of the announcements by using the standard event study methodology. Thus, announcements of appointment of an outside director are associated with increase in shareholder wealth.

A corroborating evidence for shareholder wealth effect is due to Brickley, Coles, and Terry (1994). The paper examines whether outside directors promote shareholder interests, by looking at a sample of firms adopting poison pills. The sample consists of 247 firms adopting poison pills over the period 1984 through 1986. The directors are classified into outsiders and

insiders using the firms' proxy statements.

Poison pills can either benefit or harm shareholders and are adopted by the board without a shareholder vote. Consequently, if outside directors represent shareholder interests, the likelihood of using a poison pill to harm shareholders should decrease with the fraction of outsiders on the board. Since the market can observe board structure, this effect should be incorporated in the initial stock-price reaction to the adoption of a poison pill. By contrast, if outside directors represent managerial interests, the likelihood of using a poison pill to harm shareholders will not vary with the fraction of outsiders on the board. In this case, the stock-market reaction will not depend on board composition. The study uses an event-study methodology, by focusing on the stock-market return over the two-day period during which the plan to adopt the poison pill becomes public.

The main finding of the paper by Brickley, *et al*, is a statistically significant, positive relation between the stock-market reaction to the adoption of poison pills and the fraction of outside directors. This is consistent with the hypothesis that *outside* directors represent shareholder interests. To be more specific about the results, the average abnormal stock return to the announcement of poison pills is positive for firms with boards that are dominated by outsiders. By contrast, when outside directors hold fewer than half the board seats, the mean and median abnormal returns are significantly negative. Also, the mean abnormal return is lower when the firm receives a takeover bid prior to the poison-pill announcement. Curiously, the relation between the abnormal return to a poison pill and the proportion of outsiders on the board is initially downward sloping and then upward sloping, with the turning point at 26.5% for the

percentage of outsiders on the board. The results on stock market reaction to poison pills are robust to various control variables, such as firm size, proportion of stock owned by the board, prior profitability, leverage, industry, institutional ownership by type, year of adoption, type of poison pill, research and development expenditures, market-to-book ratios, etc.

There are performance measures other than shareholder wealth, which are used in the empirical literature, to test the effect of outside directorship. Unfortunately, documented results based on these measures do not show the positive monitoring role of outside directors. Fosberg (1989) is an interesting example here. A paired sample methodology is used to test for a relationship between the proportion of outside directorship (POD) and various measures that gauge firm performance. It is argued that, if outside directors are useful in disciplining management, there should be differences among the cashflows of companies where outside director monitoring is strong and those where it is weak. Firms, whose outside directors effectively monitor the performance of management, should have higher level of sales, fewer employees, lower selling, general and administrative expenses, and a higher return on equity than comparable firms whose management is less well disciplined.

The study uses a random sample (for 1979) of 200 firms, drawn from the firms that were listed continually on the CRSP tape through December 1983 and were listed in the 1979 Moody's Industrial Manual. The POD of each firm was obtained using Moody's, and the fundamental measures relating to assets, leverage, and four-digit SIC code of each firm were obtained from the COMPUSTAT tape for 1979.

A paired sample methodology is used where firms in the same industry of comparable

size and capital structure and with a significantly different POD are paired. Two groups of paired firms are formed; in the first, firms with a  $POD \leq 0.5$  (non-majority firms) are paired with firms with a  $POD \geq 0.5$  (majority firms). The second group consists of pairs of firms in which one of the firms has a POD between .5 and .67 (non super-majority firms) and the other has a  $POD > 0.8$  (super-majority firms). Using two groups of paired firms makes it possible to investigate the question of whether a majority or a super-majority of outside directors is needed to control the board.

Fosberg is not able to confirm the hypothesis that presence of outside directors enhances firm performance. Specifically, no relationship is found between the proportion of outside directors (POD) in the board and the various variables used to gauge firm performance. In fact, to the contrary, non-majority firms had a mean ROE 1.1% greater than majority firms, with no statistically significant difference, though. Similarly, non-majority firms have, on average, a higher sales level than majority firms, although, again, the difference is statistically not significant.

The paper offers two explanations for its finding on no relationship between percentage of outside directorship and firm performance. *First*, management may succeed in getting outside directors elected to the board who are either incapable or unwilling to properly discipline management. In this case, outside directors would not be providing the monitoring services contracted for by the shareholders. A *second* explanation is that the other mechanisms for controlling the agency costs associated with the separation of ownership and control, such as markets for corporate control, effectively motivate and discipline management, thereby leaving

little room for the role of outside directors.

Another study, Hermalin and Weisbach (1991), also fails to find a relationship between board composition and performance. Hermalin and Weisbach (1991) attempt to measure differences in firm performance caused by board composition and ownership structure. These two variables are used to measure the direct incentives and monitoring faced by top management. The authors view the board as one of the alternative control devices that limit agency problems between top management and shareholders. Their main conclusion is that there is no relation between board composition and performance, while there is a strong relationship between ownership structure and performance.

An average Tobin's Q (ratio of firm's market value to replacement cost of assets) is used as a measure of profitability for a sample of 142 NYSE firms for 1971-83. The data on board composition and ownership are based on corporate proxy statements. CEO tenure is calculated by locating the exact date of any CEO change in the Wall Street Journal index. The measure of profitability, Q, is regressed on measures of control structure, as well as other variables which should affect Q. For effects of board composition, piecewise linear equations are estimated, with sample breaks at 40% and 60% outsiders. The authors also control for variables other than those in the control structure which might affect Q (e.g., expenditures on research and development and advertising).

Hermalin and Weisbach advance a couple of interesting arguments for the absence of a relationship between board composition and performance. They argue that inside and outside directors have their respective advantages and disadvantages. If each board is *optimally*

weighted between insiders and outsiders, there would be no cross-sectional relation between board composition and performance in equilibrium. Another explanation advanced by them is that firms reduce their agency problems to the same residual levels. Since residual agency problems are all that matter for performance, variation in performance will be uncorrelated with mechanisms used (e.g., board composition) to reduce the underlying agency problems.<sup>2</sup>

The result on ownership structure is interesting in that firm performance first improves with increase in stock ownership by top management, and then begins to decline. To be more specific, at levels of ownership less than 1%, Q increases with ownership. At levels greater than 20%, Q decreases with ownership. Between 1% and 20% ownership, the effect seems to be negative at lower levels and positive at higher levels, but is statistically insignificant. CEO tenure does not affect profitability at low levels of tenure, but CEO's who remain on the job too long (more than 15 years) reduce corporate performance.

The results are consistent with a trade off between alignment and entrenchment. At low levels of ownership, performance increases with increases in ownership. This may be because, at these levels, management's interests are increasingly aligned with those of the shareholders, while at the same time, with less than 1 percent of the stock, management is not insulated from other disciplinary devices, such as the takeover market. Beyond 1 percent, though, performance declines with ownership, as increasing insulation from disciplinary devices more than offsets the

---

<sup>2</sup> Bhagat and Black (1996) also find inconsistent evidence on the effect of board composition on performance in a long-horizon study. In their follow-up survey (1997), they use the evidence to suggest that the current push for board independence is unwarranted. However, the issue is unsettled. If it is just an endogeneity issue, then it would be difficult to detect the performance effect of board composition. The other issue is the accountability of independent boards, or the extent to which they are truly independent. So far the empirical literature is unable to uncover the real sources of the mixed nature of the relationship between board composition and performance. This is an important avenue for future research.



increased alignment of interests. Likewise, the negative profitability effect for CEOs, beyond a fifteen year tenure, may be attributable to them remaining on the job far too long and hence becoming entrenched.

## 2. CEO Turnover

Board monitoring effectiveness may manifest itself in managerial hiring and firing decisions. CEO turnover is one possible measure of gauging board effectiveness. The paper by Weisbach (1988) tests the hypothesis that inside and outside directors behave differently in their decisions to remove the CEO. The incentives for the two groups of board members are presumed different. The insider directors are unlikely to remove the CEO as their careers are tied with the CEO, while the outsiders have reputational incentives to remove an ineffective CEO. An interesting policy ramification here is mandating a minimum number of outside directors on the board, if CEO turnover is related to outside directorship.

The study is for the period 1974 -1983 using *Forbes 500 largest* firms and CRSP financial data. The board is assumed to be outsider-dominated if such directors constitute greater than 60%, and inside-dominated if they constitute less than 40%; otherwise, the board is treated mixed. The CEO turnover is defined so as to exclude death and age-related departures. A logit model is used to estimate the probability of a CEO losing job. The variables used to explain the probability of CEO turnover include company's stock returns, earnings change and board composition.

The main result is that the performance measures play a significant role in firing the CEO

if the board is outsider-dominated. No similar results are obtained for insider-dominated boards. Specifically, the following results were obtained, controlling for firm size and industry.

The probability of removal implied by the LOGIT model for outside-dominated boards ranges from 7% for the worst performing firms to 1.3% for the top performing firms. The difference is statistically significant. By contrast, for the inside board, the probability range is 3.6% to 5.7%, thus implying that inside board firms are not very sensitive to returns in deciding the CEO's fate.

The excess returns for CEO removal are positive and significant for outsider and mixed boards, but close to zero for insider boards.

Overall, these results show significant differences in the pattern of monitoring management between inside and outside director dominated boards. To the extent that independent directors are more vigilant in replacing poorly performing management, there should be *value creation* for shareholders. The observed shareholder wealth effect of CEO turnover is consistent with more efficient monitoring by independent directors.

A corroborating evidence is provided by Park and Rozeff (1996), but with a focus on a choice of a new CEO rather than firing an existing one, for the period 1979- 86 and using announcements from the *Wall Street Journal* CRSP financial data. The paper looks at a sample of 385 CEO changes and tries to relate the effect of large outside share holding, outsider-dominated boards, firm size , management entrenchment and firm performance on the choice of new CEO. For the sample size of 385 with 278 inside CEOs, the LOGIT model is used to estimate the implied probabilities of new CEO being insider or outsider. The standard event

methodology is employed to estimate excess returns due to CEO replacement announcement.

The main result is that, in the cross-sectional logit regression model, the greater the level of ownership by large outside shareholders, the more likely the firm is to select an outside CEO. There is significant excess positive returns associated with selection of outside CEO. The corollary results include the size effect and the tenure of the CEO. The larger is the firm, the less probable is the selection of an outside CEO. Also, the longer the tenure of the CEO as director, the less probable is the selection of an outside CEO.

### C. Board Size

While the board's capacity for monitoring increases as more directors are added, the benefit may be outweighed by the *incremental* cost of poorer communication and decision-making associated with larger groups. Such a viewpoint has been advanced by Lipton and Lorsch (1992) and endorsed by Jensen (1993). Thus, limiting the size of the board may improve efficiency, and Yermack (1996) provides an empirical investigation of the performance effect of board size on a sample of 792 companies across eight years (1984-1991). His main finding is that there is a clear inverse relation between firms' market valuation and the sizes of boards of directors. There is also evidence that CEO's incentives from compensation and the threat of dismissal are greater in companies with small boards.

The analysis is based on the data generated from a panel of firms drawn from annual Forbes 500 lists of the largest US public corporations as measured in sales, assets, market capitalization, and net income. The number of directors for each company was obtained from

proxy statements. The dependent variable for regressions is an approximation of Tobin's Q calculated from data obtained from the COMPUSTAT. A least squares regression model of Tobin's Q is estimated against board size and control variables for company size, industry membership, and board stock ownership. The model is then re-estimated using different measures of firm size. Financial ratios measuring profitability and efficient use of assets are used as dependent variables in the same linear regression model used above for Tobin's Q.

The results can be summarized as follows. First, investors' valuation of companies declines steadily over a range of board sizes between *4 and 10*. Beyond 10, essentially no relation appears to exist between board size and market valuation, and the results are not sensitive to firm size. Second, profitability ratios and asset utilization ratios deteriorate rapidly over the range of board sizes between 4 and 10, and then deteriorate less rapidly over the range of 11 and higher. Third, CEO incentives from compensation and the threat of dismissal operate more strongly when companies have small boards. Indeed, it is found that the presence of non-executive chairmen and non-CEO presidents improves firm valuation, thereby giving credence to the view that CEOs should be prohibited from serving as chairmen of the board.

Finally, Yermack finds results that have a negative bearing on the role of outside directorship, since the average fraction of outside directors is found to increase gradually with board size. In fact, firm market valuation is largely unaffected by the number of inside directors on the board. For "gray" directors (i.e., nonemployee directors with personal or business relationships with the company, such as bankers, major suppliers, and consultants), firm valuation decreases as the number of such directors increases. For outside directors, the effect is

negative from 4 to 9 directors, and mildly positive for ten or more outside directors. This, of course, challenges the commonly held belief (and that in the earlier discussion above) that outside directors contribute to improved corporate governance. Yermack's research findings also suggest that the possibility for improvements in corporate governance by restricting board sizes.

#### **D. Committee Structure**

The effectiveness of the board may be affected not only by its composition (i.e., proportion of outside directors) and size but also by its internal administrative structure. Klein (1995) evaluates the effects of the committee structure of boards and the directors' roles within these committees on the effectiveness of the board. She proposes a committee structure with specialized roles to enhance the board's performance in its productivity and monitoring. That is, each board committee should specialize in either productivity or monitoring issues, and these committees should be staffed with board members most likely to achieve these goals.

The paper has two basic hypotheses. *First*, boards use committee structures to facilitate, evaluate, and ratify long-term investment decisions and to monitor the performance of senior management. *Second*, *productivity-oriented* committees are staffed primarily by insiders; whereas *monitoring-oriented* committees are comprised primarily of outside directors. The Regression analysis and summary statistics are used to test the hypotheses based on a data sample consisting of 485 of the S&P 500 firms. Proxy statements, 10K filings and annual reports of all these firms were collected. Information about various committees was obtained either from

these reports or from the corporate secretary's office directly. Also, the Hotelling  $T^2$  test is used to determine whether the mean of the joint distribution of insiders/affiliates/outsidees for each committee is the same as the joint distribution for the entire board. Actually, these test statistics show that audit, compensation and nominating committees (i.e., the typical committees of the board) are not drawn randomly from the board's population.

The principal results of the paper can be summarized as follows: *First*, monitoring committees (audit, compensation and nominating) are disproportionately comprised of directors independent of management. On the other hand, productivity committees (finance, investment and strategic issues) are disproportionately comprised of directors employed by the firm. *Second*, there is a positive relationship between the percentage of outsiders on monitoring committees and factors associated with the benefits of monitoring, such as the firm's outstanding debt and free cash flow. A positive relationship is also found between the percentage of insiders on productivity committees and measures of firm productivity, such as relative net income, productivity of capital expenditures, and stock market returns. It is also interesting to note a corollary that may be of interest to corporate governance. There is a strong propensity towards non-insiders serving as members of monitoring committee, but monitoring committees do not appear to be comprised solely of directors independent of management.

#### **E. Compensation Structure**

Do boards perform functions other than monitoring? Actually, the committee structures uncovered by Klein (1995) suggest other related functions, particularly compensation. This is

also supported by Chang ' s (1995) argument that the board performs the function of committing compensation to the managers so that they may invest the necessary human capital in firm-specific knowledge. For industries, where industry-specific skills required of the managers are low, the takeover market may serve as an effective control mechanism. However, if managers are required to make substantial investment in industry- specific skills, performance-based compensation, as induced by the board, is likely to be more effective.

Differences in the compensation structure and governance structure also arise on account of firms attempting to achieve favorable *product market* outcomes (Kedia, 1997a and 1997b). Kedia (1997a) finds that compensation contracts offered to top management depend on the nature of strategic interactions between firms in the product markets. Strategic *substitutes* arise when increase in actions by a rival decreases the firm's marginal profits, and strategic *complements* occur when marginal profits increase due to an increase in a rival's actions. Under strategic substitutes, the compensation would be designed to create an incentive for management to seek an aggressive output strategy, and hence biased toward sales maximization and away from profit maximization. The opposite is true in the case of strategic complements. Indeed, Kedia provides evidence supporting differences in CEO compensation *sensitivity* based on strategic interactions in the product markets. For strategic *substitutes*, for instance, the CEO compensation has *lower* sensitivity to firm value but higher sensitivity to sales. In her subsequent paper, (Kedia, 1997b) finds that firms use incentive contracts, rather than capital structure (e.g., Brander and Lewis, 1986 and Maksimovic, 1986), as a precommitment device in the product markets. This is presumably because incentive contracts are more direct in dealing with incentives than capital

structure decisions. However, the role of governance structure and internal control mechanisms in product markets is a research area that is attracting increasing attention.

#### **IV. Endogenizing Board Structure**

Are observed board structures optimal solutions to corporate governance problems? Our earlier discussion took board structure (e.g., composition, size, etc.) as given and analyzed its monitoring effectiveness in terms of such measures as firm performance and CEO turnover.

There is now some very recent and limited literature on the issue of *endogenizing* board structure and hence enhancing our understanding of the evolution of observed corporate governance.

Another advantage of this strand of literature is that it contributes to the theoretical dimension of the role of board in corporate governance, as the overall literature is largely empirical. This also sheds light on, or even reconciles, the differing views on the board of directors and its interface with management and shareholders. The first view, represented by Fama and Jensen (1983), maintains that the board serves as an important institution to resolve the manager - shareholder agency problem. The second, represented by Mace (1986), maintains that, since boards tend to show little dissent, they perform little monitoring. In fact, as we describe below, Warther (1994) develops a theoretical model that allows coexistence between little active *dissent* and yet strong monitoring.

Warther examines the board as an entity different from either shareholders or managers, with its own distinctive utility. He explicitly acknowledges the dominant role of managerial



discretion on the composition of the board. This departs from our earlier focus on the monitoring role of the board by modeling management discretion on board composition. Thus, the two-way dynamics of board and management interaction have been introduced. The interesting feature of the model is an explanation for the absence of active dissent to coexist with strong monitoring.

Here are the specifics of the model. The composition of the board is endogenized by an interplay of actions of the board members and management. The board members have a utility function that depends both on *firm value* as well as on *retention* of their directorships. Thus, board members are partially but not totally aligned with shareholders. The model explains how a seemingly inactive board still performs significant corporate governance function. The equilibrium obtained demonstrates that the off-equilibrium strategy of firing the manager is a credible threat to entice good management. Since an unsuccessful vote to fire would lead to ejection of a board member (as empirically documented by Mace, 1986, and Whisler, 1984), possible loss of board seat ensures that board members do not exercise their power to fire managers *trivially*.

The model lends itself to some comparative statics, in accordance with the agency tradition. For instance, lowering the ejection penalty (i.e., aligning the board members' utility with those of shareholders) leads to more effective monitoring. Also, concentrating the information gathering in a single board member increases effectiveness, similar to concentrated shareholding (Shleifer and Vishny, 1997).

There are a few limitations. *First*, the paper fails to address the question of board member selection once a board member is ejected. It is quite likely that the manager shall try to

find a replacement who is more aligned with his interests than the member being replaced or the other independent member left on the board. The bargaining process following the ejection of a board member is ignored by the author. *Second*, the model uses an artificial construct of distinct declaration stage and voting stage to obtain the necessary equilibrium. The empirical observation of such board behavior is not documented. *Third*, the role of market discipline is ignored, although there is substantial evidence that takeovers and boards are substitute arrangements for corporate governance, as we shall see in the next section.

A related inquiry into *endogeneity* of board structure is pursued by Hermalin and Weisbach (1997) who attempt to answer two basic questions. How do boards get to be the way they are? What determines who gets added or taken off a board? Director selection is crucial to an understanding of corporate organization and governance, as it affects the roles the board can play and how effectively it can play them. An important issue addressed in the paper is how boards can be chosen through a process partially controlled by the CEO but yet can still be somewhat effective in monitoring the CEO. In their model the board effectiveness is a function of the board's independence. This, in turn, is a function of negotiations (implicit or explicit) between the existing directors and the CEO over who will fill vacancies on the board. Their analysis shows how the CEO's bargaining power over the board-selection process depends on his perceived ability. Many empirical findings about board structure and performance arise as equilibrium phenomena in the model.

In a related study, Hermalin and Weisbach (1988) employ a sample of 142 firms, for which earnings data are taken from the COMPUSTAT, and returns data from CRSP. Proxy

statements between 1971 and 1983 are used for data on board characteristics. From the data on board composition, each director is classified as inside, outside, and "gray". CEO tenure is calculated by locating the exact date of any CEO change in the *Wall Street Journal* Index.

The dependent variables in the estimation equations are discrete (e.g., departures from the board). Consequently, a Poisson model, rather than OLS, is used in maximizing a log-likelihood function to estimate parameters. Among a number of results that Hermalin and Weisbach find are: (a) firms tend to add inside directors when their CEO approaches retirement; (b) inside directors are more likely to leave, and outside directors more likely to join, the board after the firm performs poorly and when it exits a product market; and (c) new CEO leads to the departure of insiders. Thus, the internal promotion and CEO succession processes affect board composition. When firms perform poorly, they tend to remove insiders and add outsiders to the board. Insiders may be fired, because they are directly held responsible for poor performance. A similar argument holds when firms exit industries. An alternative explanation, of course, from the agency tradition is that poor performance is an indicator of managerial inefficiency, and hence motivating greater monitoring of management through more outside directorship on the board. Thus, some inside directors need to be displaced to make room for outside directors.

Chidambaran and John (1997) examine the role of relationship investing in solving agency problems. They characterize relationship investing as a process in which a large institutional investors monitor the firm with the cooperation of the management. In a world of incomplete contracting, they address the agency problem caused by a managerial compensation structure which puts too much weight on the perceived market value of the firm and too little on

the realized liquidation value. The results characterize compensation and monitoring cost structure such that it would pay the institution to monitor and it benefits the management to cooperate in the monitoring process.

Another inquiry into an endogeneity of corporate boards is pursued by Noe and Rebello (1996). The paper is motivated by a host of stylized facts. Board members are often outsiders who apparently have weak financial ties to the firm. They have relatively little inside information regarding firm's operations. There is an increased awareness of independent directors and increased cooperation between blockholders (e.g., institutional investors) and boards. The paper considers explicitly an interaction between board composition and compensation. The authors derive a corporate governance mechanism that includes both outsiders and insiders.

The paper explicitly models the role of director compensation in achieving the efficient outcome. It is shown that recourse to reputational concerns may not be strong enough to align the outside board members sufficiently with shareholders. Thus, the paper establishes the link between management compensation and board member compensation as substitute devices in achieving shareholder wealth maximization.

There are other results in the paper that seem to accord with observed stylized facts: (a) boards with slight majority of outsiders are more effective than those dominated by either insiders or outsiders (see empirical studies - Baysinger and Butler, 1985 and Bhagat and Black, 1995); (b) board effectiveness is reduced by interlocking directorships; and (c) Firm performance is enhanced by coordination between outside directors (e.g., separate meeting of

outsiders) or large blockholdings. The paper has some limitations. *First*, unlike Warther (1994), potentially the important effect that management has on board composition is ignored. In the same vein, while there are penalties for inside members, who vote against policy proposals, there are no such penalties for outside members. *Second*, the paper fails to model the interaction of the takeover market with the board, which would mitigate the need for compensation. This is the subject that we turn to in the next section.

## **V. Interaction Among Different Mechanisms**

Recent empirical evidence suggest that the different mechanisms of corporate governance interact. For example, as managerial ownership increases, although the alignment of managerial interest with that of shareholders increases, the effectiveness of takeovers in disciplining managers decreases. Most of the existing theoretical and empirical literature has studied a selected corporate governance mechanism at a time in isolation of the others. Some recent empirical literature has examined the interaction among the different corporate governance mechanisms, e.g., Agrawal and Knoeber (1996), Brickley and James (1987), Hermalin and Weisbach (1991). However, the theoretical literature on the interaction of the different corporate governance mechanisms is in its early stages. John and Kedia (1997) model the interaction of four of the main mechanisms of corporate governance (managerial ownership, monitoring by a large outside shareholders, monitoring by banks and disciplining by takeovers). In that paper they study the blend of different mechanisms of corporate governance which will constitute an optimal structure. They set up and solve a stylized problem of designing the optimal structure of

corporate governance from the perspective of an entrepreneur faced with the agency problem associated with delegating the running of the firm to a manager. They examine the design of an optimal governance system structured from four of the above mechanisms of corporate governance. The optimal blend of the different mechanisms are characterized as a function of the embedding economy's takeover environment and the efficiency of monitoring by banks and large shareholders. The optimal configurations derived correspond to the governance system observed in the different economies around the world.

It will be useful to study the interaction among the mechanisms of corporate governance by examining the interplay between internal and external corporate governance mechanisms. In particular, there is a *substitution effect* between the external devices for managerial control (e.g., takeover market) and internal mechanisms for control (e.g., board of directors).<sup>3</sup> Oliver E. Williamson (1983) suggests a testable Substitute Hypothesis which claims that the importance of board as corporate control mechanism, will be greater in corporations operating in markets where takeovers are difficult. Therefore, the substitution hypothesis implies that when the takeover market is weak, there is greater role for internal control mechanisms, and boards would tend to be outsider dominated. When the takeover market is active, the hypothesis predicts that less internal control is necessary, and the board tends to have more insiders.

---

<sup>3</sup> The internal and external governance mechanisms can be identified as follows. The internal mechanisms include ownership concentration of managers represented by shareholdings by CEO and other insiders (officers and directors), shareholdings by blockholders, institutional shareholdings, and the corporate board. The external governance mechanisms include the takeover market, managerial labor market, and the bankruptcy mechanisms. Agrawal and Knoeber (1996) examine the interaction of seven of these mechanisms in a simultaneous equation framework. This allows for determination of substitute/complimentary relationship between the different mechanisms.

It turns out that the empirics have preceded the hypothesis without rigorous theoretical foundation. In our synthesis, we wish to begin by focusing on recent theoretical discussions. Hirshleifer and Thakor (1994) provide a rigorous theoretical analysis of an interplay between the board of directors and the takeover market. More specifically, their paper seeks to provide a theoretical explanation for appearance of a bidder, determination of bid price, determinants of board's reaction to hostile bid, and stock price reaction caused by board's decision on management firing/retention and acceptance/resistance to a hostile bid. The stock price reaction is, indeed, puzzling, as both negative and positive reactions to the same board action (e.g., firing the management or resistance to a bid) have been observed.

The paper develops a model in which the disciplinary roles of board and the takeover market are considered simultaneously, and a sequential equilibrium is obtained as an outcome of this interaction between the board and the bidder. This provides the theoretical support for the empirical evidence that takeovers and boards are substitute devices in corporate governance (Brickley and James, 1987). The model explains why even unsuccessful takeovers might be followed by high management turnover. This is also supported by the empirical evidence that greenmail, or even non-greenmail, inducing unsuccessful takeover attempts are associated with top management changes (Klein and Rosenfeld, 1988, Franks and Mayer, 1994).

There are additional results of interest. An explanation is offered for a board which resists a takeover acting in the shareholders' interests. It demonstrates the importance of a well-reputed vigilant board *even when there exists a well-functioning takeover market*. The model endogenously determines the optimal bid price for the bidder, given his private signal and

board's action. A pricing schedule which leads to a separating equilibrium is shown to be feasible.

The paper's limitations follow from *exogeneity* of board composition and many restrictions that seem to force the model. It would benefit from consideration of the more recent literature on endogeneity of board structures (e.g., Warther, 1994). For instance, the paper assumes many exogenous restrictions on the beliefs and the probability assessments of players to obtain the equilibrium. No theoretical reasoning for those restrictions is provided. Further, the board is modeled as a single entity with two possible types - *lax* or *vigilant*; what makes the board a particular type is not endogenous to the model. Nor is the influence of management on board composition.

Hermalin and Weisbach's (1991) result on board composition and ownership structure has further evidence on the substitution hypothesis. Using the Tobin's Q variable as a performance measure and ownership and management and board composition as explanatory variables, they find strong relationship for ownership structure but not for board composition. Their puzzling finding on the board composition effects of performance has been explained in the earlier section.

The continuing debate on board effectiveness has been pursued by Morck, Shleifer and Vishny (1989) who pose the question in terms of the substitution hypothesis. In particular, they seek to answer the following question: which problems does the board of directors deal with effectively, and which ones instead trigger the external control market? The characteristics of firms going through internally initiated management turnover are contrasted with those targets



under both friendly and hostile takeovers. This may allow for an inference on what the board actually accomplishes.

The data are based on all publicly traded 1980 Fortune 500 firms. Out of the 454 firms in the sample, 82 were acquired or went through an MBO in the period 1981-85. These are then classified as hostile or friendly takeovers. Measures of performance are average Tobin's Q (ratio of firm's market value to the replacement cost of physical assets), stock-market abnormal return (cumulative over the period 1978-80, using CAPM), and employment growth rates (over 1978-80).

Overall, Morck, Shleifer and Vishny find that the board is responsive to poor performance, and it succeeds more in addressing firm-specific rather than industry-wide problems. More specifically, the principal findings, which follow from decomposition of Q into industry-specific and firm-specific components include: *first*, complete top management turnover is associated primarily with poor performance of a firm relative to its industry, and not with adverse industry shocks. *Second*, hostile takeovers are targeted at firms concentrated in troubled industries. The underperformance of these firms is less pronounced than poor performance of their industries. *Third*, firms acquired in friendly deals are much like firms experiencing complete turnover, with their performance being poor relative to their industry. In fact, a higher equity stake of top executive reduces the likelihood of complete turnover and a hostile takeover, but raises that of a friendly acquisition. Also, firms run by founding families are more likely to be targets of friendly acquisitions. Note that the empirical results are controlled for firm size (logarithm of market value of firm's assets) so as to avoid spurious correlation, since large firms

are less likely to be acquired.

While there may, in fact, be a substitution between the board and the takeover market in disciplining management, an issue still remains as to the discipline on the board itself. In other words, who "monitors the monitor"? Kini, Kracaw and Mian (1995) attempt to answer such a question by examining the impact of the takeover market on the boards. They also examine the impact of takeovers on the board composition. They track turnover of the CEOs for a sample of 244 successful takeovers for the period spanning 1958-84.

The authors find that for the majority of the cases (141 firms), there was CEO departure, while there was no turnover for the rest of takeovers (103). For disciplinary (i.e., CEO turnover) takeovers, there is a significantly larger decrease in board size, than for non disciplinary takeovers. Indeed, disciplinary takeovers lead to a significant increase in *turnover* of inside board members as well as *departure* of outside board members. Also, there is significantly greater turnover in the dominant group of directors following a disciplinary takeover. Thus, the overall effect of the disciplinary takeover is to facilitate balance in board composition. This has an interesting implication for the question posed earlier, namely "who monitors the monitor"? The collective evidence in the paper is that the board performs an important monitoring function as the substitution hypothesis predicts. In addition, the disciplinary takeover market serves as an external control not only over the CEO but also the board, and hence *monitoring the monitor*.<sup>4</sup>

---

<sup>4</sup> Chang (1995) provides a theoretical analysis into a tradeoff between performance-based compensation and outside intervention. The relative efficiency between these two control mechanisms is shown to be linked to manager- specificity of assets and ability of an independent party (e.g., board) to make a commitment to management. Thus, another role for the board, apart from monitoring, is suggested. The paper explicitly takes into account the cost of human capital the manager loses in the event of hostile takeover. The author shows that the board can play an important commitment role, thereby assuring the managers to invest the required human capital even in the presence of takeover threat. When the firm's

The banking industry provides an interesting avenue for validation of the substitution hypothesis. Brickley and James (1987) pursue this line of inquiry. Some states allow takeovers, while others have statutes severely limiting the corporate acquisitions of commercial banks. The hypothesis would imply that the banks in non-acquisition states would have more outside directors. Further, if the owner concentration and outside directors are substitute control mechanisms, the degree of owner concentration should be high for banks in non-acquisition states, that have low proportion of outside directors. Unfortunately, both of these conjectures are not consistent with the data in the banking industry.<sup>5</sup>

The 1979 banking industry data were used with a sample of 891 (502 in acquisition states and 389 in nonacquisition states). To control for differences in the production technology, the data was limited to unit banking states. The first regression has the number of outside directors as the dependent variable, with size and dummy variable for acquisition as explanatory variables. The second regression uses the same explanatory variables to explain the ratio of outside directors. The main results may be summarized as follows: The prediction of the substitution hypothesis that the nonacquisition states would have higher outsider director as they substitute for takeover market is not borne out by the data. To the contrary, it is the boards of

---

assets are not very manager - specific, intervention is likely to be a more effective device for inducing optimal managerial actions. On the other hand, performance compensation is more likely to serve as an incentive alignment when manager-specificity is high. The main limitation of the analysis is that it provides no motivation or incentive for the board to undertake the commitment function.

<sup>5</sup> A substitution hypothesis has been investigated using insurance data. Mayers, Shivdasani, and Smith (1997) investigate the role of outside directors in the corporate control process. The investigation exploits variation in ownership structure within the insurance industry, since in mutuals, ownership rights are not transferable. Nontransferability of rights restricts the effectiveness of control mechanisms, while enhancing the monitoring role of outside directors. They find evidence in support of the substitution hypothesis in that mutuals employ more outside directors than stock institutions, and firms

banks in states where the acquisitions are allowed that have higher percentage of outside directors. The authors attribute the result to the dual function that outside directors perform - managerial control and expert advice (e.g., new business leads). They conjecture that the second function is predominant in states where the takeover market exists.

Nonetheless, support for the substitution hypothesis is found when ownership concentration and outside directors are examined as possible corporate governance mechanisms for nonacquisition states. In these states, either a greater number of outside directors or higher concentration of ownership does reduce managerial consumption of perks. Thus, outside directors and ownership concentration can be effective control devices, although they may not be substitutes for the takeover market<sup>6</sup>

## **VI. The Debate Continues: Some Directions for Future Research**

The current literature addresses a range of issues relating to corporate governance and board effectiveness. However, the debate on corporate governance continues, at an accelerated rate, both in the academic circles and popular press, and both at domestic and international

---

that switch between mutual and stock charter experience corresponding changes in board composition. <sup>6</sup> Does board composition affect takeover strategy? Bange and Mazzeo (1996) provide evidence on this question by examining the effect of board composition on takeover offers (i. e., negotiated mergers vs "by-pass" offers). They find that bidder firms consider the composition of the target's board of directors when form their takeover bids. They "by-pass" the board when the CEO of the target also chairs the board (a case of management entrenchment). The offer is less likely to be successful if outside directors represent a majority of the board. It is also argued that firms with larger boards receive more "by-pass" offers. The reasoning given is that larger boards reflect more complex organizations, and hence top management may have trouble persuading board members to agree and make decisions. In addition, a larger board of directors may not be able to function effectively as a controlling body leaving management relatively free.

levels. The debate is, in part, fueled by increased activism of institutional investors (e.g., Calpers) and renewed interest in the relative efficacy of bank-based (e.g., Japan and Germany) and market-based systems (e.g., US and UK). What constitutes a "perfect" board? The California Public Employees' Retirement System (Calpers) has recently proposed 37 principles of good governance - 23 "fundamental" (e.g., outside majority) and 14 "ideal" (e.g., age limit). The Calpers proposal is currently under debate. The New York Times analysis shows that few companies currently conform to key tests of good governance as in the Calpers proposal (see Appendix). In addition, some anecdotal evidence is suggested in the article, arguing that no clear pattern of linkage between corporate performance and governance exists. For instance, Texas Instruments was virtually "perfect" under the Calpers rules, and it had, indeed, outperformed the Standard and Poor's index since 1990. On the other hand, the Walt Disney Co., which had also displayed spectacular performance, failed the key tests of Calpers.

The debate on the Calpers rules of good governance has gone beyond national boundaries and is being felt in Europe, where already some serious questions are being raised about the German system of governance (see Wenger and Kaserer, 1996). An important feature of the German system is a supervisory board, consisting of both capital owners (e.g., banks) and employees (via a principle of co-determination). In addition, banks, apart from their universalist features, possess the privilege of proxy votes and apparently exercise considerable influence on governance and management. The system lacks active markets for corporate control due to thinness of the stock markets and prevalence of ownership stock companies by other companies. However, the system has began evolving to the market-type variety of the US governance

scheme due to global pressure coming from institutional investors (see Schroder and Schrader, 1996), and additionally to the relative success of the US in the late 80s and 90s in exerting external pressure on corporate governance (see Kaplan, 1997).

It is also increasingly being recognized that outside directors should be compensated in a manner that aligns them with shareholders. Indeed, one of the criticisms of the Calpers proposals is its excessive reliance on accountability, with little attention to the structure of compensation for the board. According to the Economist: "To create more effective company boards...outside directors must be given a far bigger stake in the success of the companies they serve. Paying them with company shares, rather than perks, is much the most constructive boardroom reform that firms could undertake..".

While sympathizing with the general line of argument that directors should have financial stake in the company, we take issue with the increasingly accepted wisdom of aligning directors with shareholders. The ultimate goal should be to maximize allocational efficiency, and an incentive system of director-shareholder alignment may even exacerbate distortions arising from conflicts between shareholders and other stakeholders to the company. Unfortunately, in the U.S. context, corporate governance mechanisms have focused on the agency problems between managers and outside equityholders. In this survey we have taken a broader view of agency problems which suggest many directions for future research. In particular, we will discuss how the corporate governance mechanisms would be influenced to ameliorate additional agency problems, such as the debt agency problem and the social agency problem.

## **A. Corporate Governance and Corporate Debt: New Perspectives**

Although the conventional perspective has been to examine corporate governance mechanisms as a way of solving managerial agency problems, the presence of risky debt would have important interaction with the design of corporate governance. In recent years, there has been a number of papers which model the debt contract as a mechanism for solving agency problems. Townsend (1979) and Gale and Hellwig (1985) consider models in which the borrower can abscond with the cash flows or profits of the firm. However, the failure to repay triggers the transfer of control over assets from the borrowers to the lender. Gale and Hellwig (1985) show that the debt contract is an optimal contract that minimizes the expected cost of investigation. Hart and Moore (1989) also model the idea that the debt contract gives the creditor important rights in the case of default, such as seizing the collateral.

One of the advantages of the debt contract is that it stipulates the rights of the creditors more clearly, and violations of those rights are easier to enforce in the courts. Moreover, the creditors, who are often banks, gain important control rights in the firm if it defaults, or if default is likely. In this sense, the effective legal protection given to the creditors through the various mechanisms of resolving abrogation of the debt contract seems to be greater than that enjoyed by dispersed equityholders. There is a large literature on the mechanisms of formal and informal renegotiation of the debt contract and the reorganization of the firm when the firm is in financial distress. While we will not discuss that literature here, the reader is referred to two recent surveys on the topic (see John (1993) and Senbet and Seward (1995)). This suggests that the design of the optimal mechanisms of resolving default are also designing governance

mechanisms for dealing with agency problems. In other words, designing the structure of corporate boards should be done in conjunction with designing institutions such as the bankruptcy procedure. Although there is a nascent literature on the optimal design of bankruptcy procedures, it is for future research to examine the interaction between a well designed corporate board and optimal *bankruptcy* procedures.

There are other important ways in which mechanisms to resolve agency problems of debt can interact with mechanisms to resolve agency problems of equity. For example, consider a firm with risky debt outstanding. If the internal mechanisms of corporate governance, say for example, the corporate board is designed to align the interest of the management closely with that of the equityholders, then debt agency remains intact. From our earlier discussion of the agency cost of debt, it should be clear that such a corporate board would *aggravate* the risk-shifting agency problems of debt even though there would be an *amelioration* of the agency cost of equity. In this scenario with multiple agency problems, an optimally designed corporate board may represent a balance between the interest of debtholders and the interest of equityholders.<sup>7</sup> For example, the debt holders should have some representation on the corporate board of directors. In fact, in the Japanese and the German corporate governance systems the main creditor banks play a prominent role. At any rate, the role of debt in corporate governance scheme is still an open issue.

## **B. Corporate Governance and Social Agency Costs**

---

<sup>7</sup> See John and John (1993) and Madan, Senbet, and Soubra (1995), where the design of the optimal top management compensation contract takes into account the agency cost of debt and the agency cost of equity. In such a contract the incentive features in the optimal contract balances the equity interest and



Corporate governance mechanisms can play a role in protecting the rights and claims of nonfinancial stakeholders. These claimholders includes customers, warranty-holders, employees, suppliers and others in the society-at-large who may hold claims against the corporation. For example, holders of jury claims in product liability suits are among the nonfinancial claimholders of a limited liability corporation. Corporate limited liability specifies a sharing rule between the nonfinancial claimholders and the set of all financial claimholders. Corporate limited liability can therefore induce agency cost between the financial claimholders and the nonfinancial claimholders. In fact, the financial claimholders can be thought of as holding a call option to buy back the assets of the firm at a *zero* exercise price. Such a pay-off structure can induce corporate insiders to make investment choices which are sub-optimal from the viewpoint of the welfare of all the claimholders (financial and nonfinancial). In other words, corporate limited liability will induce investment choices which deviate from the socially optimal ones. See John and Senbet (1996) for a discussion of the tax deductibility of debt payments as a mechanism to ameliorate social agency problems in the presence of other agency problems.

In many cases the social planner, the government or its agencies, can be considered as a representative of the claims of the nonfinancial claimholders. For example, the Federal Deposit Insurance Corporation (FDIC), or Pension Benefit Guaranty Fund (PBGF) serves as a guarantor of such claims. In designing the optimal corporate governance mechanisms we may also need to consider reducing the social agency costs. In this context further research should look into designing internal governance mechanisms which reduce not only the managerial and the debt agency costs but also the social agency costs. Should the employees, or the government or the

---

the creditor interest.

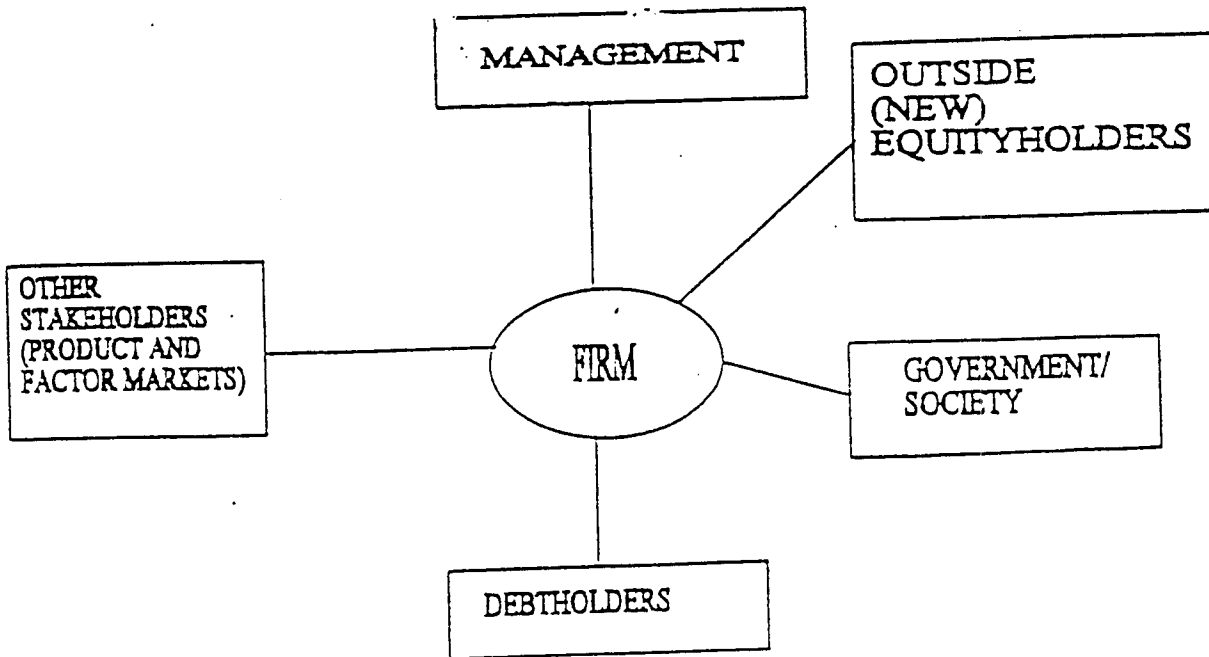
regulator have a representation on the corporate board? Although it is not present in the U.S., employees are given a representation on the corporate boards in Germany, and the government or their proxies in the nationalized banks often have representation on the corporate boards in France. This suggests that internal governance mechanisms which solve multiple agency problems need to be studied further.

## **VII. Conclusion**

In this paper we have surveyed the empirical and theoretical literature on the mechanisms of corporate governance. Although we have focused on the internal mechanisms of corporate governance, we have also surveyed the literature on their interaction with the external mechanisms. Departing from the conventional view of corporate boards and corporate governance as primarily addressing agency cost of equity, we have also considered their potential role in reducing agency cost of debt and social agency costs. In exploring optimal design of corporate governance mechanisms as one which simultaneously addresses multiple agency problems, we provide several directions for further research.

Figure I.

THE FIRM (CORPORATION): A NETWORK OF CONTRACTS



CLASSES OF AGENCY

<p>EXCESSIVE PERQUISITES          UNDERINVESTMENT          OVERINVESTMENT          RISKSIFTING          ASYMMETRIC INFORMATION          BANKRUPTCY AND          FINANCIAL DISTRESS</p>	<p>MANAGEMENT          DEBTHOLDERS, STAKEHOLDERS          GOVERNMENT/SOCIETY          DEBTHOLDERS, GOVERNMENT          NEW EQUITYHOLDERS          DEBTHOLDERS, STAKEHOLDERS</p>
--	---

Figure II. Payoffs to Capital Contributors and Society as a function of Firm Cash Flow

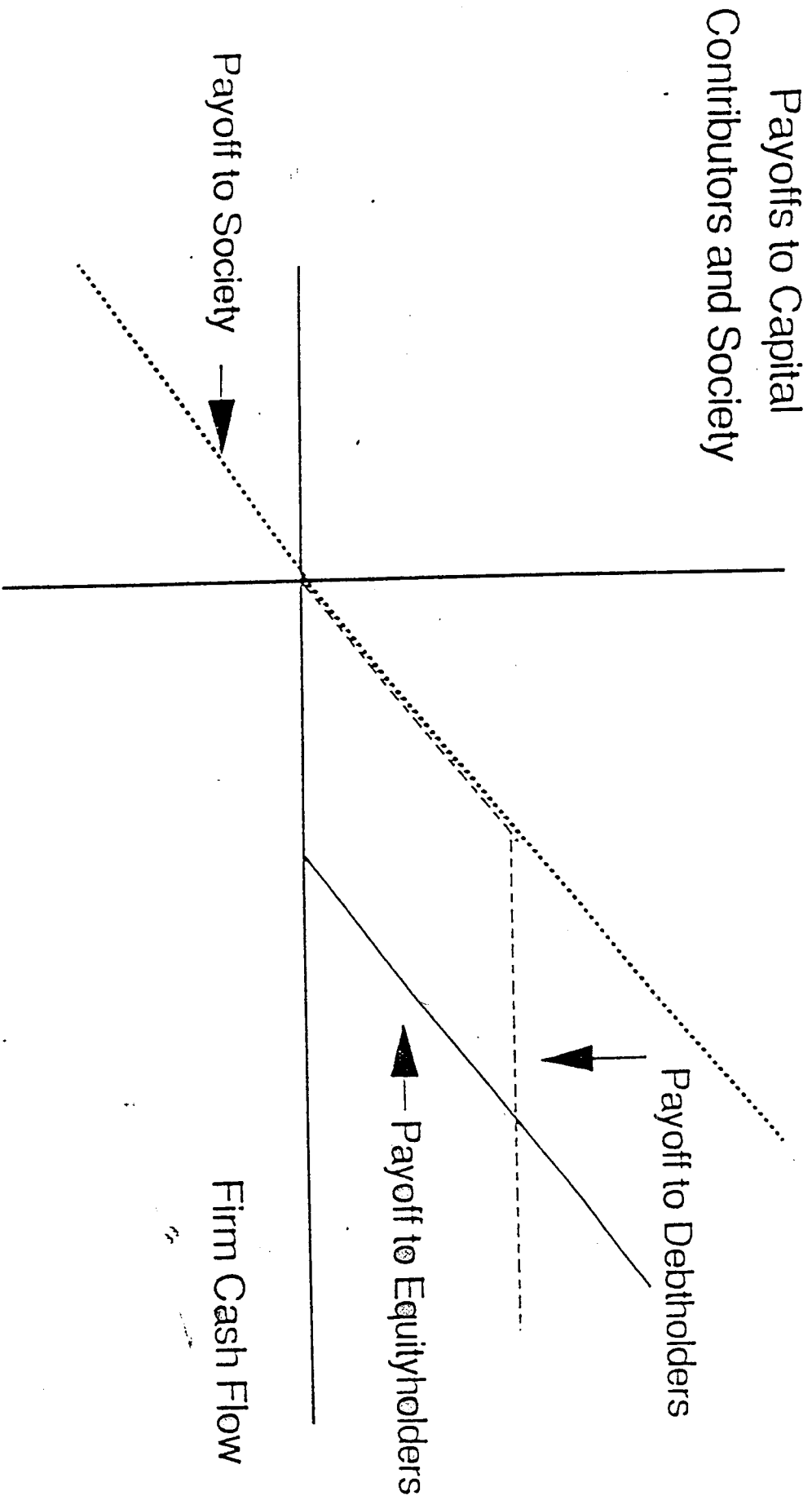
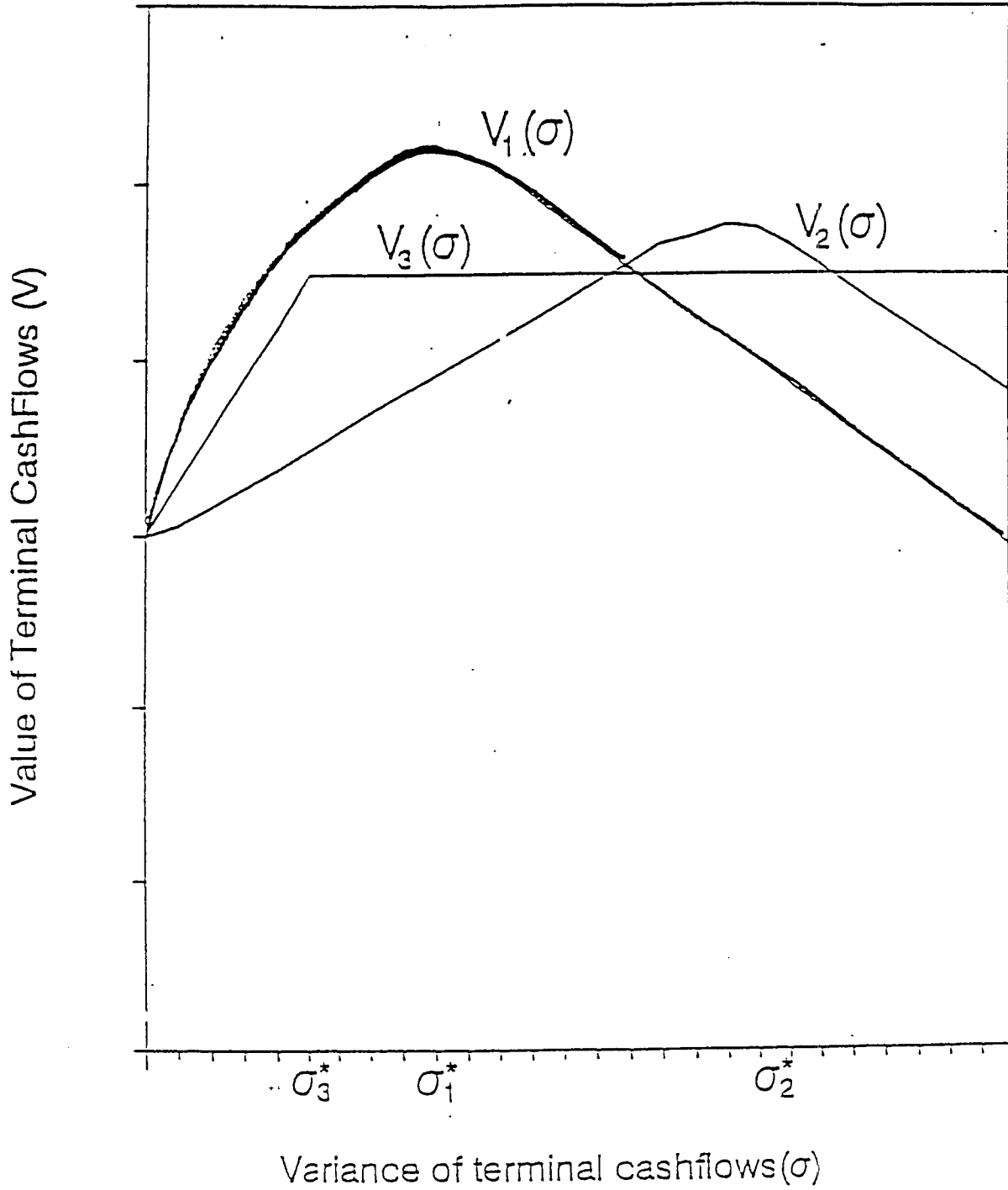


Figure III. A Model of Debt Agency (Asset Risk-Shifting)

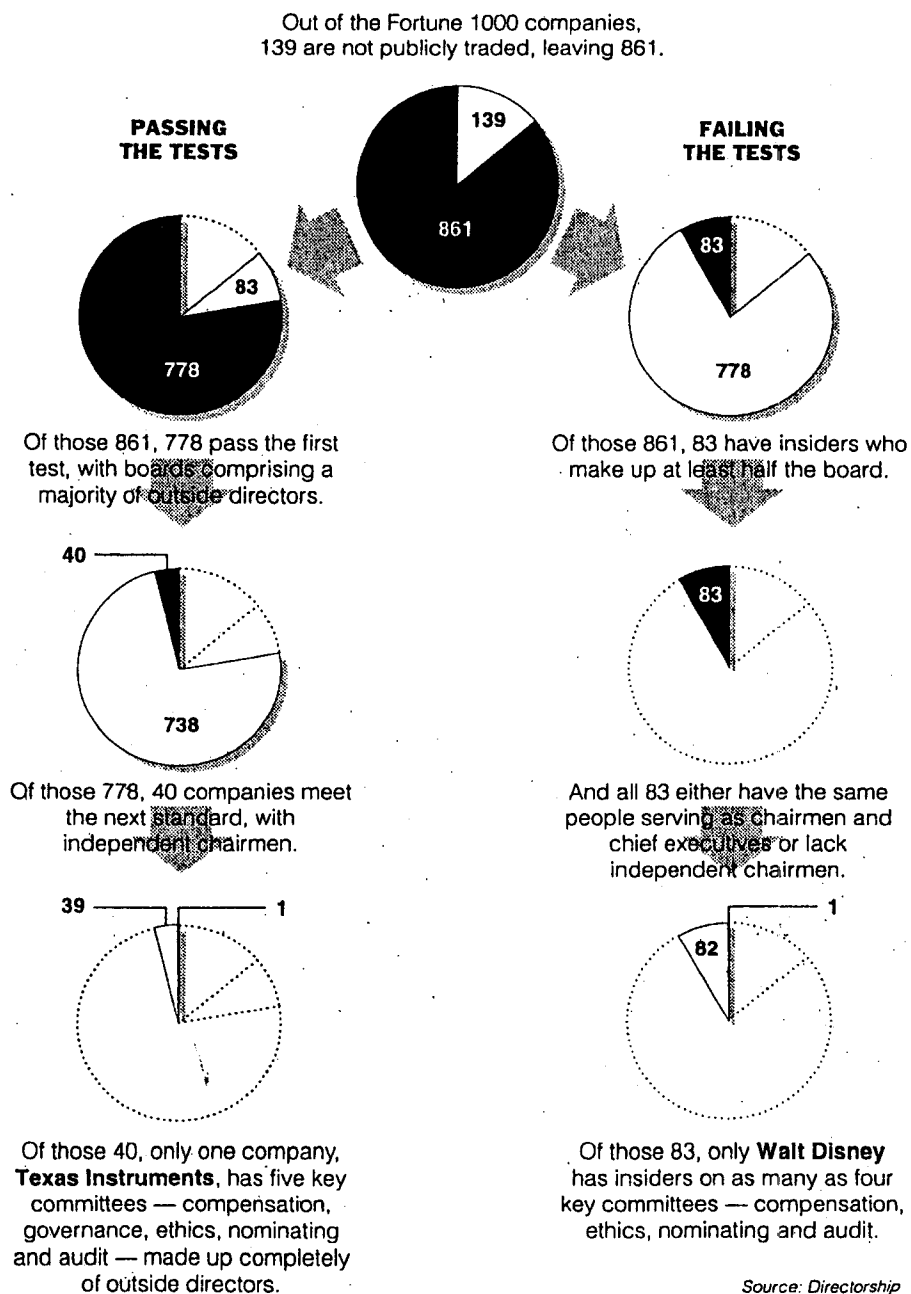


$(V, \sigma)$  - characterization of the investment opportunities

## Appendix A. The search for the perfect corporate board

### A.1. One in a thousand

To find out if the “perfect board” exists, Directorship examined large industrial and service companies to see which lived up to several of Calper’s key tests of good governance. Few did. The companies would have fared even worse had the analysis included hard-to-quantity criteria, including recommendations that independent directors meet without the chief executive present at least once a year or have some expertise in fields like finance and international markets.



Source: Directorship

## References

Agrawal, A. And C. Knoeber (1996), "Firm Performance and Mechanisms to Control Agency Problems Between Managers and Shareholders", working paper, Wharton School.

Bange, M. and M. Mazzeo (1996), "Board Composition, Board Effectiveness and the Observed Form of Takeover Bids", Michigan State University, Working Paper.

Barnea, A., R. Haugen, and L. Senbet (1985), *Agency Problems and Financial Contracting*, Prentice-Hall, Inc.

Baysinger B. and H. Butler (1985), "Corporate Governance and Board of Directors: Performance Effects of Change in Board Composition", *Journal of Law, Economics and Organization*, 1, 101-124.

Bebchuk, L. (1988), "A New Method for Corporate Reorganization", *Harvard Law Review*, 101, 775-804.

Berglof, E. (1994), "The Governance Structure of the Japanese Financial Kieretsu", *Journal of Financial Economics*, 36, 259-284.

Bhagat, S. and B. Black (1996), "Do Independent Directors Matter?", Columbia University, Working paper.

Bhagat, S. and B. Black (1997), "Board Composition and Firm Performance: The Uneasy Case for Majority-Independent Boards", Columbia University, Working Paper.

Brander, J. and T. Lewis (1986), "Oligopoly and Financial Structure: the Limited Liability Effect", *American Economic Review*, 76, 956-970.

Brickley, J. And C. James (1987), "The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking", *The Journal of Law and Economics* (April), 161-181.

Brickley, J., J. Coles, and R. L. Terry, (1994), " Outside Directors and the Adoption of Poison Pills", *Journal of Financial Economics*, 35, 371-390.

Chang, C., (1995), "Performance-Based Compensation and Outside Interventions as Alternative

Incentive Mechanisms and the Commitment Role of the Board", University of Minnesota, Working Paper.

Chidambaran, N. K. and K. John (1997), "Relationship Investing and Corporate Governance", New York University, Working Paper.

Demsetz, H.(1983), "The Structure of Ownership and the Theory of the Firm", *Journal of Law and Economics*, 26, 375-390.

Demsetz, H. and K. Lehn (1985), "The Structure of Corporate Ownership: Causes and Consequences", *Journal of Political Economy*, 93, 1155-1177.

Diamond, D.W. (1991), " Monitoring and Reputation: The Choice Between Bank Loans and Directly Placed Debt", *Journal of Political Economy*, 99, 688 - 721.

Easternbrook, F., and D. Fischel, (1991), "The Economic Structure of Corporate Law", Cambridge: *Harvard University Press*.

Fama, E. And M. Jensen (1983), "Separation of Ownership and Control", *Journal of Law and Economics*, 26, 327-349.

Franks, J. And C. Mayer (1994), "The Ownership and Control of German Corporations", London Business School, Working Paper.

Fosberg, R., (19 89) "Outside Directors and Managerial Monitoring", *Akron Business and Economic Review*, 20 (2), Summer, 24-32.

Gale, D and M. Hellwig (1985), "Incentive Compatible Debt Contracts: One Period Problem", *The review of Economic Studies*, 26, 327-349.

Gertner, R. D. Scharfstein, J. Stein (1994), "Internal versus External Capital Markets", *Quarterly Journal of Economics*, 109, 1211-1230.

Gilson, S. (1990), "Bankruptcy, Boards, Banks, and Blockholders", *Journal of Financial Economics*, 27, 355-387.

Green, R.C. (1984), "Investment Incentives, Debt, and Warrants", *Journal of Financial Economics*, 13, 115-136.

Grossman, S. and O. Hart (1980), "Takeover Bids, The Free-Rider Problem, and the Theory of the Corporation", *Bell Journal of Economics*, 11, 42-64.

Harris, M. and A. Raviv (1988), "Corporate Governance: Voting Rights and Majority Rules",



*Journal of Financial Economics*, 20, 203-235.

Hart, O. and J. Moore (1989), "Default and Renegotiation: A Dynamic Model of Debt", Harvard University, Working Paper..

Haugen, R. and L. Senbet (1978), "The Insignificance of Bankruptcy Costs to the Theory of Optimal Capital Structure", *Journal of Finance*, 33, 383-393.

Haugen, R. and L.Senbet (1988), "Bankruptcy and Agency Costs: Their Significance to the Theory of Optimal Capital Structure", *Journal of Financial and Quantitative Analysis*, 23, 27-38.

Hermalin, B. And M. Weisbach (1997), "Endogenously Chosen Boards of Directors and Their Monitoring of the CEO", forthcoming, *American Economic Review*.

Hermalin, B. and M Weisbach, (1988), "The Determinants of Board Composition", *RAND Journal of Economics*, 19 (4), Winter, 589-606.

Hermalin, B. And M. Weisbach, (1991) "The Effects of Board Composition and Direct Incentives on Firm Performance", *Financial Management*, Winter, 101-112.

Hirshleifer, D. and A. Thakor (1994), "Managerial Performance, Boards of Directors and Takeover Bidding", *Journal of Corporate Finance* 1, 63-90.

Holderness, C. And D. Sheehan (1988), "The Role of Majority Shareholders in Publicly Held Corporations", *Journal of Financial Economics*, 20, 317-346.

Jensen, M., (1989), "Active Investors, LBOs and the Privatization of Bankruptcy," *Journal of Applied Corporate Finance*, 2, 35-44.

Jensen M., ( 1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems," *Journal of Finance*, 48, 831-880.

Jensen, M. and W. Meckling (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics*, 48, 831-80.

Jensen, M. and K. Murphy (1990), "Performance Pay and Top-Management Incentives", *Journal of Political Economy*, 98, 225-264.

Jensen, M. and J. B. Warner (1988), "The Distribution of Power Among Corporate Managers, Shareholders, and Directors," *Journal of Financial Economics*, 20.

John, K., (1993), "Managing Financial distress: A Survey and a Research Agenda," *Financial Management*, Autumn.

John, T.A., and K. John, (1993), "Top-Management Compensation and Capital Structure," *Journal of Finance*, 48, 949-974.

John, K., and S. Kedia, (1997), "Design of Corporate Governance: Role of Ownership, Takeovers, Bank Debt and Large Shareholder," NYU Working Paper.

John, K., and L. Senbet (1996), "Limited Liability, Corporate Leverage, and Public Policy," New York University, Working Paper.

John, K., T. John, and L. Senbet (1991), "Risk-Shifting Incentives of Depository Institutions: A New Perspective on Federal Deposit Insurance Reform," *Journal of Banking and Finance*, 15, 895-915.

John, K., A. Saunders and L.W. Senbet (1997), "A Theory of Bank Regulation and Management Compensation", University of Maryland and New York University, Working Paper.

John, K., L.W. Senbet and A.K. Sundaram (1994), "Corporate Limited Liability and the Design of Corporate Taxation", Unpublished Paper, University of Maryland and New York University.

Kaplan, S.(1994), "Top Executive Rewards and Firm Performance: A Comparison of Japan and the United States", *Journal of Political Economy*, 102, 510-546.

Kaplan, S. (1997), "The Evolution of US Corporate Governance: We are All Henry Kravis Now", University of Chicago, Working Paper.

Kedia, S. (1997a), "Product Market Competition and Top Management Compensation", Harvard University, Working Paper.

Kedia, S. (1997b), "Product Markets and the Strategic Role of Governance Mechanisms", Harvard University, Working Paper.

Klein, A., (1995) "An Examination of Board Committee Structures", New York University, Working Paper.

Klein, A. and J. Rosenfeld (1988), "Targeted Share Repurchase and Top Management Changes", *Journal of Financial Economics*, 20, 493-506.

Kini, O., W. Kracaw, and S. Mian, (1995), "Corporate Takeovers, Firm Performance, and Board Composition", *Journal of Corporate Finance*, 1, 383- 412.

La Porta, R., F. Lopez-De-Silanes, A. Shleifer, and R.W. Vishny, (1997), "Legal Determinants of External Finance," *Journal of Finance*, 52, July, 1131-1150.

- Lipton, M. and J. Lorsch (1992), "A Modest Proposal for Improved Corporate Governance", *Business Lawyer*, 59, 59-77.
- Mace, M. (1986), *Directors, Myth, and Reality*, (Harvard Business School Press, Boston).
- Maksimovic, V. (1986), "Optimal Capital Structure in Repeated Oligopolies", *Rand Journal*, 19, 389-407.
- Madan, S., L. Senbet, and B. Soubra (1995), "Capital Structure and the Design of Managerial Compensation", University of Maryland, Working Paper.
- Mayers, D., A. Shivdashi, and C. Smith (1997), "Board Composition and Corporate Control: Evidence from the Insurance Industry", *Journal of Business*, 70 (1), forthcoming.
- Morck, R., A. Shleifer, and R. Vishny, (1989), "Alternative Mechanisms for Corporate Control", *American Economic Review*, 79, 842-852.
- Myers, S. (1977), "Determinants of Corporate Borrowing", *Journal of Financial Economics*, 11-41.
- Noe, T. and M. J. Rebell, (1996) "The Design of Corporate Boards: Composition, Compensation, Factions, and Turnover", Georgia State University, Working Paper.
- Park, S. and M. Rozeff, (1996) "The Role of Outside Shareholders, Outside Boards, and Management Entrenchment in CEO Selection", SUNY Buffalo, Working Paper.
- Rajan, R.G. (1992), "Insiders and Outsiders: The Choice Between Informed and Arm's-Length Debt", *Journal of Finance*, XLVII, 1367 - 1400.
- Romano, R., (1993), "The Genius of American Corporate Law", Washington, DC: *American Enterprise Institute Press*
- Rosenstein, S. and J. G. Wyatt, (1990) " Outside Directors, Board Independence, and Shareholder Wealth", *Journal of Financial Economics*, 26, 176-191.
- Senbet, L. and J. Seward (1995), "Financial Distress, Bankruptcy and Reorganization", in R. Jarrow, V. Maksimovic, and W. Ziemba, *Finance*, North-Holland Research Volume.
- "The Search for the Perfect Corporate Board", *The New York Times* (August 3, 1997).
- Schroder, U. and A. Schrader (1996), "The Changing Role of Banks and Corporate Governance in Germany: Evolution Toward the Market?", Deutsche Bank Research, Working Paper.

- Shleifer, A. and R. Vishny (1986), "Large Shareholders and Corporate Control", *Journal of Political Economy*, 94, 461-488.
- Shleifer, A. and R. Vishny (1997), "A Survey of Corporate Governance", *Journal of Finance*, 52, 737-775.
- Shivdasani, A. (1993), "Board Composition, Ownership Structure, and Hostile Takeovers", *Journal of Accounting and Economics*, 16, 167-198.
- Stulz, R. (1988), "Managerial Control of Voting Rights", *Journal of Financial Economics*, 20, 25-59.
- Townsend, R. (1979), "Optimal Contracts and Competitive Markets with Costly State Verification", *Journal of Economic Theory*, 21, 265-293.
- Warther, V. (1994), "Board Effectiveness and Board Dissent: A Model of the Board's Relationship to Management and Shareholders", USC, Working Paper.
- Weisbach, M., (1988), "Outside Directors and CEO Turnover", *Journal of Financial Economics*, 20, 431-60.
- Wenger, E. and C. Kaserer (1996), "The German System of Corporate Governance: A Model Which Should not be Imitated", University of Wuerzburg, Working Paper.
- Whisler, T. (1984), *Rules of the Game* (Dow Jones - Irwin, Homewood, Illinois).
- Williamson, O.E., (1983), "Organizational Form, Residual Claimants, and Corporate Control", *Journal of Law and Economics*, 26, 351-
- Williamson, O.E., (1988), "Corporate Finance and Corporate Governance," *Journal of Finance*, 43, 567-592.
- Yermack, D. (1996), "Higher Market Valuation of Companies with a Small Board of Directors", *Journal of Financial Economics*, 40, 185-211.