

The Functioning of the Board of Directors

Boards exist across a large variety of organizational forms like partnerships, mutuals, non-profits, as well as corporations. Their composition is predictable based on the theory of monitoring and control. On average, the number of members of the board of directors (CEO, CFO, etc.) is 10. The BOD approves and oversees major managerial decisions. Corporate performance can be linked to insider holdings of stocks of the corporation. Partnerships have only insiders, non-profits have large donors, and corporations have insiders, possibly claim holders like institutional debtholders, and outsiders. Outsiders may have no idea what a good idea is. Insiders have business specific knowledge. The BOD should have input from current management so some current managers should be members. The negative relation between insider holdings and performance is generally attributed to the risk aversion of managers. The greater the percentage of stocks held by insiders, the more likely they are to take on low risk-low return projects.

Outsiders are professional referees. Their careers are linked to the performance of the corporations for which they serve. We expect that they will resign from corporate boards in which their advice is not heeded.

The ultimate test of the decision control of the board is whether it can replace the top management—the CEO, president, and/or COB. The evidence is that top management does turnover more when corporate performance slips, though the rate of turnover is small. The evidence also supports the view that outside dominated boards are more likely to turnover top management, suggesting that outside board members do provide professional referee services.

Mace (1971), Nader et al. (1976), and Eisenberg (1976) have suggested that the board of directors is dominated by top managers and far too often fails to effectively monitor and properly motivate managerial decision making. In an apparent conversion, Jensen (1989, 1993) has also become a proponent of the view that internal corporate control devices headed by the board of directors most commonly fail to protect shareholder interests.

Those concluding that corporate boards are ineffective in controlling agency problems have offered numerous suggestions for improving the board's effectiveness. The most common suggestions include increasing the number of outside directors present on the board and increasing the equity holdings of directors. A number of papers have provided empirical evidence indicating that these factors are important to firm performance. Existing evidence suggests that insiders tend to leave and outsiders join corporate boards following poor performance (Hermalin and Weisbach (1988)), the appointment of outside directors leads to a positive stock price reaction (Rosenstein and Wyatt (1990)), and that CEO turnover is positively related to the percentage of outsiders on the board (Weisbach (1988)).¹

However, even with such support, a direct link between corporate board structure and corporate performance has yet to be established. Hermalin and Weisbach (1991) find that cross sectional data fails to indicate that board structure affects corporate performance. While Byrd and Hickman (1992) are able to detect some increasing but diminishing returns to corporate acquisitions from the presence of outside directors, there is still no indication of the existence of some optimal combination of inside and outside directors. In fact, Hermalin and Weisbach

¹ Existing evidence also suggests that increasing ownership leads to improved corporate performance, as measured by Tobin's Q, at low levels of ownership but increased ownership at higher levels of ownership is more likely to be associated with poorer performance (Morck, Shleifer, and Vishny (1988) and McConnell and Servaes (1990)).

(1991) note that without further tests it is difficult to conclude that board structure alone has any effect upon performance.

The traditional view of corporate boards and the view put forth by Fama and Jensen (1983a,1983b) places directors at the top of the corporate hierarchy. This view assumes that directors have the ability to replace managers who do not act in the best interest of shareholders. Fama and Jensen (1983a) note that:

“The decision process of some open corporations seem to be dominated by an individual manager, generally the chief executive officer. In some cases this signals the absence of separation of decision management and decision control, and, in our theory, the organization suffers in the competition for survival. We expect, however, that the apparent dominance of some top managers is more often due to their ability to work with the decision control systems of their organization than to their ability to suppress diffuse and separate decision control. In any case, the financial press regularly reports instances where apparently dominant executives are removed by their boards.”

Mace (1971), Eisenberg (1976), Nader et al. (1976) and Jensen (1989, 1993) have challenged the traditional view, emphasizing that far too often directors do not have the power to discipline managers. In fact, Mace (1971) presents survey evidence suggesting that the managers are often able to force the resignation of directors that are hostile to managements' proposals. Even Jensen (1989, 1993) has changed his view of the effectiveness of corporate boards. Consider the following statements from Jensen (1993):

“The recent GM board revolt (as the press has called it) which resulted in the firing of CEO Robert Stempel exemplifies the failure, not the success, of GM's governance system.”

“The job of the board is to hire, fire, and compensate the CEO, and to provide high-level counsel. Few boards in the past decades have done this job well in the absence of external crisis.”

While Jensen's views on the effectiveness of the corporate boards may have changed, the framework put forth by Fama and Jensen (1983a, 1983b) for analyzing the role of the board of directors is still important to understanding the operation of corporate boards.

According to Fama and Jensen, the modern corporation is characterized by a separation of decision management and decision control. Decision management includes the functions of initiating proposals and implementing ratified decisions. These functions are performed by hired managers. Decision control involves ratifying proposals and monitoring and rewarding the performance of managers in implementing these ratified proposals. The decision control functions are reserved to the owners of the corporation but due to the diffuse nature of corporate ownership the right to carry out these functions are normally delegated to a board of directors. Fama and Jensen (1983a, 1983b) point out the important roles played by both inside and outside directors in serving this decision control function. Insiders are necessary because they have valuable firm specific information and knowledge.² The presence of outside directors is necessary to control agency problems that arise between managers and residual claimants and to encourage value enhancing managerial competition within the organization. The presence of top level managers other than the CEO also allows outside directors to obtain more information about the

² We define inside directors to include officers, former officers, and those directors with family ties to officers or former officers throughout our analysis. This also seems to be consistent with the usage of these terms by Fama and Jensen (1983a).

abilities of the CEO and the managers themselves. This also allows the outside directors to evaluate the potential pool of future CEOs.

Others (e.g. Mace (1971), Nader et. al. (1976), and Eisenberg (1976)) insist that regulations requiring boards to be composed of a majority of outsiders will lead to improved corporate performance. Jensen (1993) suggests that the CEO should be the only insider serving on the board of directors. Advocates of outsider dominated boards claim that it is impossible for upper level managers who work directly under the CEO to critically evaluate and monitor the CEO. This view assumes that outsider dominated boards are more likely to challenge and discipline the CEO that does not act in the best interest of the shareholders.

We are left with two different existing views of the importance of board composition. We find ourselves more in agreement with the view originally put forth by Fama and Jensen. Both inside and outside directors have important roles to play on the board of directors. We do not discount the fact that inside directors have an incentive not to cross the CEO but we also recognize that insiders often have strong incentives to point out the CEO's shortcomings. Fama (1980) has also pointed out that because a large part of the inside directors human capital is firm specific they have a vested interest in making sure that the company is not mismanaged. Mace (1971) and Jensen (1993) both note that outside directors often choose to exit the board of directors when the CEO is not perceived to be acting in the best interest of the shareholders. Because of their firm specific human capital, it is often more costly for insiders to exit the board under similar circumstances. Hirschman (1970) notes that when the cost of "exit" are high, "voice" is more likely to be used as a way to express discontent. Therefore, we expect that in many cases inside directors are more likely to put forth resistance to the CEO than are the outside directors.

This also makes it even more important that outside directors have had a chance to familiarize themselves with the company's upper level managers other than the CEO. Only by convincing outside directors that the CEO is not acting in the best interest of the shareholders will upper level corporate managers be able to motivate action by the board of directors. The outsiders must be able to distinguish between valid criticisms of the CEO and comments designed to damage the CEO's reputation. Having direct contact between these upper level managers and the outside directors provides outsiders with valuable information about these managers that allows them to better evaluate the observations of these corporate insiders.

While it is possible, as Jensen (1993) suggests, that such a relationship can be established without having the insiders serve as board members, it is more likely that such relationships will be established when the corporate insiders are directors. For example, Hermalin and Weisbach (1988) find evidence that corporate boards add inside directors as the CEO nears retirement suggesting that outside directors are better able to use the board environment to evaluate the abilities of upper level managers. It is also more likely that upper level managers will challenge the CEO or go along with an outsider director's challenge when they have a vote and when they have better information about the general mood of the outside directors.

Finally, it is also important to realize that just like insiders, outside directors have an incentive to expropriate shareholder wealth. Proposals like those of Jensen (1993) ignore the fact that giving outsiders complete domination over the decision control function may also allow these outsiders to assume control of the decision management function as well. In order for a board with a large number of insiders to sacrifice shareholder welfare one must assume that it is costly and difficult for shareholders to replace the board. If this is the case, then it is equally difficult for shareholders to replace a bad board that is composed mainly of outsiders. Board

composition balanced between insiders and outsiders has the potential to minimize agency costs by allowing for some degree of insider ownership of common stock.³

In the modern corporation, control of the board of directors effectively leads to control over the corporation. It is not evident that an individual with a dominant personality will behave differently as an outside COB dominating a group of outside directors compared to a dominant inside CEO overseeing a group of inside and outside directors. Human beings are self interested by nature and providing an individual or group of individuals with access to power will result in the same agency problems regardless of whether or not these individuals are corporate insiders or outsiders. Problems arise when there is a corporate board environment that does not allow for a frank, open, and critical discussion of the issues at hand. What is important is that the corporate board structure allows for both an adequate discussion of performance and the removal of the decision makers that do not act in the best interest of the shareholders. We expect that this is most likely to be true when both insiders and outsiders are present. For example, Byrd and Hickman (1992) find that the relation between acquisition performance is a positive but decreasing function of the percentage of outsiders on the board. We attempt to see how general this empirical finding is.

In addition to board composition Fama and Jensen also focus upon some of the previously mentioned aspects of what might be called board culture or environment. In particular, they note that the existence of an active market for corporate control explains some important elements of corporate board structure. They suggest it explains why inside board members have more influence than outside directors and why outside directors are most commonly decision agents in other organizations. Given that inside directors have access to information about the corporation that is not readily available or not easily understandable to those unfamiliar with the day to day operations of the corporation they are usually better judges of a given project's chances of success. When the takeover market is working properly, it serves as the ultimate monitor of corporate decision making. Insiders are forced to act in the best interests of shareholders by the market for corporate control.

Fama and Jensen (1983a, 1983b) suggest two reasons why outside directors are most commonly expert decision makers in other organizations. Not only does this experience provide them with the knowledge and ability to both advise and evaluate managers but more importantly it provides outsiders with an incentive to fulfill their responsibilities to shareholders. One of the principal propositions of Fama and Jensen's original thesis is that outside board members are professional referees. In this view these referees have the incentive to develop reputations as experts in decision control. Their performance as outside directors serve as a signal of their abilities in other similar capacities. This reputational capital provides the outside directors with an incentive to monitor managerial decisions. Outside directors do not want to be associated with poorly performing companies.

In their model it is this concern for reputational capital that motivates directors to guide managers to act in the best interest of shareholders. In order to ensure that companies perform well, outside directors are most invaluable in their ability to provide advice and counsel to managers. Many corporate decisions concern business and legal situations that outsiders may have previously encountered. This advice and counsel can be the difference between good and bad decisions. When managers fail to consider the opinions of these outsiders they are apt to

³ Outsiders that hold much stock essentially become insiders.

make poor decisions. It is when outside directors are not allowed to function in this role that the internal corporate control mechanism is most likely to fail.

Fama and Jensen (1983a) suggest that outside directors who find themselves in a nonreceptive environment should be able to replace the top manager with another who does allow the outsiders to function in their proper roles. On the other hand, survey evidence from the United States, Canada, and Great Britain [See Mace (1986), Peterson (1977), and Spencer (1983)] indicates that outside directors who normally find themselves in this type of corporate environment are more likely to voluntarily resign than they are to attempt to change the status quo. This suggests that outsiders often do not have the power to replace top managers.

Observers who fear that outsiders have too little control of top management argue that giving outsiders more power and influence is likely to solve this problem. However, outsiders that *do* have the ability to change the status quo may also choose to resign. The personal cost of resigning is usually minimal for outside directors. In most cases resignation allows the outside director to distance himself from the poorly managed companies before his reputation is tarnished. The personal cost to any given outside director of opposing the CEO even when the opposition is successful and beneficial to shareholders is likely to be far greater than the personal benefits of this action or the costs of exit. For example, Jensen (1993) suggests that even in situations where outside directors have the necessary influence to alter managerial decisions, the existence of a board culture that emphasizes “politeness and courtesy at the expense of truth and frankness” often leads capable outsiders to resign in order to avoid open conflict. Therefore, one would expect that even powerful outsiders choose to resign the boards of poorly managed companies.

Only when it is costly for the outsider to resign would we expect the outsider to fight the CEO. In the United States, government regulation often prevents those outside directors for whom it would be costly to exit the firm from serving on the board in the first place. Banking regulations commonly prevent holders of large portions of the companies debt from serving on board. Antitrust regulations prevent representatives from the company’s major suppliers and/or customers from serving on the board. In most cases only large equity holders remain as potential outside directors that have an incentive to challenge managers due to the costliness of exit. However, large equity holders are not very common and when they do exist it is commonly in the form of institutional investors that are also severely restricted by government regulation from becoming involved in the corporate governance process.

Upon considering this notion of board culture one comes to conclude that in order to protect their reputations directors are often more likely to exit the boards of poorly performing companies than they are to attempt to sanction the managers of these corporations. Such a view suggests that higher turnover of outside directors should serve as a signal that directors are not involved in the decision making process of the company. The exit of these directors is a signal that they believe that managers are following a course of action that is not in the best interest of shareholders. The decisions made by companies that fail to carefully consider the input of directors will be worse than decisions made by top managers who are more attune to the counsel provided by these professional referees. Hence, the prediction is that badly managed companies or companies with a board culture that penalizes open and possibly critical comments by directors will have more turnover of outside board members than well managed enterprises.

Inside directors also have an incentive to depart firms where their advice is being ignored but as previously noted most of the insiders reputational capital is firm specific. This makes it more likely that the unsatisfied inside directors are more likely to work within the firm to make

changes. We also realize that successful insiders often develop CEO specific capital in addition to firm specific capital. In such cases it may be extremely costly for the directors to exit the firm but it may also be extremely costly to voice their discontent. In these cases insiders are likely to quietly follow the CEO's leadership rather than mount any opposition. Such behavior is likely to lead to longer insider tenure as these inside directors have a difficult time leaving the firm. If this is the case, then insider tenure is more likely to be a signal of managerial entrenchment than of managerial ability and is more likely to be associated with poor performance.

For a number of reasons, we expect that board size will negatively affect corporate performance. All of the problems of team production come into play in large group settings. The effect of any given director's influence on the board is small which creates an incentive for the directors to shirk. Likewise, large boards make it difficult to give every director a forum to review all the relevant issues. Smaller boards naturally cure the shirking problem. On a small board, outside directors can press issues they feel are important. The CEO also has a greater incentive to seriously consider these comments. Reenforcing this theme, Johnson (1990) a former vice president and board member at General Motors suggests that smaller boards eliminate the need for slide shows and force an issue oriented agenda with true deliberation on the part of both inside and outside directors.

The lack of significant equity ownership by corporate directors creates a divergence between director and shareholder interests in the modern corporation. As director ownership increases we expect that firm performance will improve as director's interests become more closely aligned with those of shareholders. As previously noted, the larger the equity holdings of the director the more costly it is for these directors to exit the board and the more likely they are to voice their opinions in the decision making process. However, Demsetz (1983) and Fama and Jensen (1983a) have pointed that significant levels of director ownership, especially among inside directors can also serve to entrench poor managers. Morck, Shleifer, and Vishny (1988), McConnell and Serves (1990), Hermalin and Weisbach (1991), and Byrd and Hickman (1992) all find that increased levels of managerial or directorial ownership initially leads to improved performance but is more likely to be associated with poorer performance at higher levels of director ownership. We expect that low levels of director ownership and possibly high levels of director ownership are more likely to be associated with poorer performance than intermediate levels.

Board reputation, as measured by the number of other directorships held by board members, is likely to be associated with better performance. More reputable board members should be better board members. Firms that are able to attract and keep these directors are more likely to be well managed firms. Kaplan and Reishus (1990) find that poor performance reduces the likelihood that top executives will receive other board appointments. Gilson (1990) finds that directors who leave companies in financial distress hold fewer seats on other boards after their departure. Shivdasani (1991) finds that directors of hostile targets hold significantly fewer other directorships than directors of nontarget firms. Even so, the effect may work in the other direction. As a director holds seats on more and more boards, time becomes a constraint and their contribution to each individual board may suffer.

Therefore, corporate performance is likely to be related to corporate board structure in many ways. It is our purpose to attempt and measure to what degree board culture, board composition, board size, director reputation, and director holdings affect corporate performance.

One of the central problem encountered in examining the impact of corporate board structure is classifying companies as well or poorly managed. We propose to solve this problem

by arguing that when a company is the object of a takeover attempt following a history of bad decisions, then it is most likely to be a poorly managed company. Poor performance alone, whether measured by accounting or market returns, is at best a noisy signal of managerial shortcomings. Performance is affected by industry and economy-wide factors outside the control of management. At the same time, the market for corporate control is not universally directed at sanctioning poor management; a catalyst for takeovers may also be new synergistic associations. However, when a corporation is a takeover target following a history of poor performance we have a double filter in sifting out bad management.

Such a notion is not new, but it has been made substantially easier to operationalize based on recent research by Mitchell and Lehn (1990). They report data on acquisition performance for all 1981 Value Line companies for the years 1982-1986. Mitchell and Lehn rank companies by acquisition performance and then examine the sample to see which companies were themselves the object of takeover attempts. Importantly for our research effort, they find that the firms with the lowest stock price returns when they acquired other enterprises were the ones most likely to be sanctioned by the takeover market. From their sample, we can identify a set of firms that are arguably classified as poorly managed and compare these to a set where acquisition performance was exceptionally profitable.

For our purposes, acquisition performance is an excellent measure of performance. Since companies are never forced to expand, this managerial decision is purely discretionary and, hence, is the clearest signal of managerial quality. Similarly, we are particularly interested in those cases where managers are ignoring the views of outside directors. This is most likely to happen when managers become enlightened with some vision of grandeur that leads them believe that their decision making skills are superior to those of other advisers. Roll (1986) has hypothesized this managerial hubris most commonly manifests itself in the form of unnecessary acquisitions. Unnecessary acquisitions are likely to result when the internal controls on managerial decision making have broken down.

While acquisition performance is our indication of managerial quality, it is not likely to be the first signal to that effect received by outside directors. Given that these acquisitions decrease the market value of the firm by as much as 23% and by 4.2% on average across all negative acquisitions in our sample it is clear that bad acquisitions impose a significant cost upon shareholders. This lack of ability or lack of concern for shareholder wealth on the part of management is surely recognized much earlier by outside directors.

The Mitchell and Lehn data set includes 401 acquisitions during the years 1982-1986 made by 289 companies tracked by Value Line in 1981. We use a subset of this sample that is broken into two groups, B and G. All of the firms that were the object of takeover attempts and that made acquisitions with negative stock-price announcement reactions are classified as Group B. This group numbers 50 firms. An equally sized group from the set of firms not the object of takeover attempts and making the most profitable acquisitions was formed. These are the best of the good bidder, non-target firms. The set is called Group G. For Group B we were able to get information from the SEC File on the board composition at the time of the acquisition announcement for 39 companies and 53 acquisitions (all those with negative returns). We were able to obtain data for 39 of the Group G firms and 53 acquisitions (all with positive returns).

The combined sample is composed of 78 firms from 48 of the 51 Value Line industry categories. Of the 39 Group B firms, nine are in industries not represented in by Group G.

Similarly, nine Group G firms have no matching industries in the Group B set.⁴ In general, the firms and acquisitions in this cross section do not seem to be bunched by industry classification.

Acquisition performance is measured as the three-day, abnormal return centered on the day the announcement was carried by the Dow Jones Broadtape. By construction, the acquisition returns vary dramatically between the two groups. Table I presents summary statistics on acquisition returns for the entire sample and for each group. Returns for Group G average +5.7 percent for 53 acquisitions; returns for Group B averaged -4.2 percent across 53 purchases. Again we can see that shareholder wealth is greatly affected by managerial acquisition decisions. These data were obtained from Mitchell and Lehn as was the information on the percentage of cash used to finance the acquisition.

To measure the characteristics of the board we examined the proxy statements associated with the election of the board that was seated at the time of the announcement of the acquisition. From the proxy statements we collected the following information on each of the directors: age, tenure on the board, stock holdings in the company, other directorships held, current or former employment in the company, and other company associations. When available we also collected similar information from the proxy statements for the four preceding years as well. We used this information to compute director turnover. When the proxy statement in the preceding years was not available, we obtained information about director turnover by examining the relevant company data from *Moody's*.

Using the information included in the proxy we define the term *inside director* to include officers and former officers of the company, as well as any director who has family relations with officers and/or former officers of the firm. Our approach differs from that of the existing literature in that we do not include those directors that have business ties or dealings with the firm as an inside directors.⁵ While it is conceivable that these affiliated directors may be the pawns of insiders in certain situations, for our purposes they are more likely to act as independent outsiders. Given that these affiliated outsiders main professional associations are with firms and organizations other than the firm in question, they have professional reputations external to the firm to protect. We expect that these directors are just as likely to depart the boards of poorly performing firms as are those outsiders without informal ties to the firm.⁶

Table II shows the summary statistics on the board size, director tenure, director age, director turnover, board composition, managerial holdings, and other directorships for the 78 firms and 106 acquisitions in the sample for the complete sample as well as by type. The results of several of our conjectures are revealed by these simple statistics.

Board size varies from 6 to 21. The mean is around 11.7 members. However, the Group B firms have boards that are over 1.5 members larger on average than the Group G firms. This is

⁴ The unmatched *Group B* industries with number of acquisitions in parentheses are: Tires & Rubber (2), Toiletries & Cosmetics (4), Integrated Petroleum (1), Grocery Stores (2), Natural Gas (1), Oil Field Services (1), Publishing (3), New Auto Parts (1), Drugstores (2), and Metals & Mining (1). The unmatched *Group G* industries are: Entertainment (3), Apparel (2), Replacement Auto Parts (2), Machine Tools (3), Metal Fabricating (2), Health Care (1), Trucking (1), Office Equipment (1), and RV Manufacturing (1).

⁵ For example see Rosenstein and Wyatt (1990), Baysinger and Butler (1985), and Byrd and Hickman (1992).

⁶ Our approach is also motivated in part due to lack of complete information. As previously noted we must rely on sources other than the proxy statements to create the series of director turnover. These alternative sources do not allow us to distinguish these affiliated outsiders from independent outsiders. Likewise for the earliest period of our sample the proxy statements themselves do not always contain this information.

consistent with the view that big boards of directors are not as effective as small boards. Big boards encourage shirking in an environment where shirking is hard to sanction directly. The environment of the board needs to make the directors feel like they are the residual claimants to their comments and observations.

For the full sample, outsiders make up 65.1% of the board members. For group G firms this number is slightly lower at 64.6% and slightly higher for Group B firms at 65.6%. These data do not reveal any obvious difference in board composition between well managed and poorly managed companies.

We calculated the percentage of outside directors and inside directors that left the board in each of the four years prior to the takeover announcement. This is our board turnover variable. The average annual turnover of board members for the whole sample is 7.6% for insiders and 7.2% for outsiders. Group G firms and Group B firms have a similar rates of turnover for inside directors. *However, the turnover rate of outside directors in Group B firms is much higher than the rate of turnover for outside directors among Group G firms.* Outside directors in poorly managed firms turnover at the rate of 8.6% per year. Only 5.8% of the outsiders on the boards of well managed firms turnover per annum. This is precisely the effect predicted by the Fama and Jensen model of corporate governance. Outside directors flee the boards of poorly managed companies.

Group G firms have outsiders with higher average ages of about 0.7 years than Group B firms. The average age of insiders is higher in Group B firms by about 0.5 years. The turnover variable suggests that Group G firms have much higher turnover of outsiders but similar rates of turnover of insiders as Group B firms. The age variables suggest that differences in turnover across the group are not due to age differences.

The total stock holdings of all the members of the board, that is, the sum of the amounts held by each member averages around 8.7 percent of the total outstanding shares of common stock. It ranges from almost zero to nearly 60 percent. Director holdings on average are approximately 4 percentage points higher in Group G firms than Group B, suggesting a positive relation between holdings and performance.⁷

The summary statistics shown in Table II support many of our hypothesis. It seems that Group B firms have large boards, higher turnover of outside directors, and smaller equity holdings by directors as predicted. However, before any conclusions can be drawn from our sample more formal analysis is needed.

To examine the relation between corporate board structure and firm performance, we regress the three-day abnormal return associated with the firm's acquisition announcement on our various measures of corporate board structure and several control variables. We begin with the variables used to represent board composition. The existing research concerning board composition (e.g. Baysinger and Butler (1985), Hermalin and Weisbach (1991), and Byrd and Hickman (1992)) find differing relations between board composition and performance at different levels of outsider representation and suggest breaking the board composition variable into three different classes representing 0 to 40%, 40% to 60%, and greater than 60% insiders. While we would like to be consistent with these studies, using these breaks with our sample results with exactly two thirds of the observations falling in the 0 to 40% insiders range and only one observation in the upper range. Hence, we choose to break our sample so that an equal number of observations fall into each class. These breaks occur at 27.3% and 40% insiders. The

⁷ Mitchell and Lehn (1990) find the stock holdings variable to be positively related to acquisition returns.

variable *inside directors less than 27.3%* is equal to one if the percentage of the board composed of inside directors is 27.3% and is equal to zero otherwise. If the percentage of insiders exceeds 40% then *inside directors greater than 40%* is equal one. Otherwise this variable is equal to zero.

We also consider the relation between ownership levels of the board and firm performance at different levels of ownership. In the case of ownership structure we break the sample at director ownership levels of 1% and 10%. These breaks are consistent with those used in other studies and also ensure that at least 20% of the sample observations fall in upper and lower ranges. Hence the variable *director holdings less than 1%* equals one when total board holdings are less than 1% and 0 otherwise. The dummy variable *director holdings greater than 10%* is similarly defined. As previously noted we expect that low levels of director ownership are possibly high levels of director ownership are associated with poorer performance.

In order to capture the effects of board culture we use the director turnover variable previously described. Again our expectation is that the insider turnover variable to be positively related to performance and the outsider turnover variable to be negatively related to performance. Board size is the size of the firm's board of directors. For various reasons discussed earlier we expect larger boards to be associated with poorer performance. Other directorships is the average number of other directorships held by the firm's directors. We expect a positive relation between this variable and acquisition performance.

Cash Financing is a control variable that represents the percentage of the acquisition purchase that is financed by cash. The coefficient on this variable is also expected to be positive. Asquith, Brunner, and Mullins (1987) and Travlos (1987) finds that there is a positive relation between acquisition returns and the percentage of the acquisition financed by cash.⁸ The summary statistics for this variable are shown in Table I.

Column 1 of Table III presents the results of formal estimation of our model. We have included the dummy variables discussed above that represent the upper and lower extremes of board composition and director holdings. Hence, the coefficients on these variables measure the shifts associated with lower and higher levels of board composition and director holdings.

The board composition variables suggest little relation between insiders as a percentage of the board and acquisition returns in our sample. While this result is consistent with our general claim that both inside and outside directors are important and that other aspects of board culture are more important than board composition, we can not completely rule out the idea that board composition does not matter at all. In a similar sense, these results do not contradict those of Byrd and Hickman (1992) because we use a different definition of insiders. When they use a similar definition of insiders they also fail to uncover such a relation. So it is difficult to determine whether our differing results are unique to our definition of inside directors, the fact that we control for other aspects of corporate board structure, or due to our different samples.⁹ At all events, there is no evidence presented here to support the claim that packing the board with outsiders will automatically enhance performance.

⁸ Myers and Majluf (1984) argue that managers typically offer stock when they realize their firm's assets are overvalued and cash when the opposite is true. This provides the market with a signal about the firm's true value.

⁹ Again data limitations do not allow us to use the Byrd and Hickman (1992) definition of insiders with our measure of director turnover. However, we did estimate our model using our definition of insiders for the turnover variable and using the definition used by Byrd and Hickman (1992) for board composition purposes. Using breaks of 40% and 60% insiders for composition dummy variables yields results almost identical to those reported in Table III suggesting that the different definition of insiders used by us is not the main determinant of our result.

The relation between acquisition performance and director holdings is consistent with our expectations for low levels of director ownership. Firms with director ownership levels of less than 1% experience returns of 4.5% less than firms with director ownership levels between 1 and 10%. This difference is significant at the 1% level. On the other hand, firms with directors owning more than 10% of the outstanding shares do not experience returns that are significantly different from firms with intermediate levels of director ownership. These results are similar to those of Morck, Shleifer, and Vishny (1988) as well as those of Hermalin and Weisbach (1991). Their results suggest that increased managerial holdings do effectively combat agency problems but that the effect becomes weaker as director holdings become extremely large.

The signs of the coefficients for the board culture variables follow the outline of the theory. The outsider turnover variable is negatively related to performance even though it is not significant at conventional levels (the probability of a value this large by chance alone is 11%). The insider turnover variable is positively and significantly related to performance at the 10% level. These variables suggest that well managed companies have higher turnover of inside directors and lower levels of outsider turnover and that this effect is still present when other factors are simultaneously controlled for. These results provide support for our view that outsiders exit the boards of poorly performing companies and that entrenched insiders are likely to be a sign of poor management. These results provide evidence that board culture does matter to firm performance.

Other variables in the two equations that have strong influence include the board size, cash financing and other directorships variables. Larger boards are associated with poorer performance. Increasing board size by one member is associated with a decrease in acquisition returns of one half of one percent. Acquisition returns are positively related to the percentage of cash used to finance the acquisition. This is consistent with the findings of other researchers. Finally, we also find that the more other directorships held by the board members, the better is performance. This is consistent with the findings of Shivdasani (1991).

Given that directors often leave firms for reasons unrelated to managerial performance and that director turnover is only one potential proxy for board culture, it is asking a lot of the data to reveal a strong relation between turnover and performance. Therefore, in an attempt to further uncover a relation between director turnover and firm performance we refine our dummy variable on board turnover to emphasize the distinction between high and low values of insider and outsider turnover. The variable *high outsider turnover* is equal to one if outsider turnover is greater than the median sample value for outsider turnover of 0.26 and zero otherwise. Similarly, *high insider turnover* is equal to one if insider turnover is greater than 0.33 and zero otherwise. The results of estimating our model using these alternative turnover variables is presented in column 2 of Table III.

The use of these dummy variables yields coefficient estimates that are consistent with our theory and are also statistically significant at conventional levels. Firms with higher than average levels of outside turnover experience announcement returns of 2.6% less than those with below average levels of turnover. Firms with higher than average turnover of inside directors experience acquisition returns of almost 2.7% more than those with lower levels of inside director turnover. These results suggest that companies that make bad acquisition decisions are more likely to have experienced higher levels of outside director turnover and lower level of inside director turnover.

That higher turnover of outside directors is associated with poorer performance is consistent with the idea that board culture is important and supports the ideas put forth by Mace

(1971) and Jensen (1993) that outside directors are more likely to exit companies with bad managers than they are to replace these managers. The relation between inside director turnover and performance suggests that poorly managed firms are more likely to have entrenched inside directors that have neither exited the board nor actively voiced their dissatisfaction with managers. This result is also consistent with the fact that well managed companies are more likely to produce good managers that are wooed by other companies. Hence, we would expect that well managed companies with good organizational structures would tend to have higher turnover rates as upper level managers depart to become top managers in other organizations.

We are left with the conclusion that director holdings, board composition, board culture, director reputation, and board size are all important determinants of corporate performance. However, we do not find evidence that suggests that board composition matters. These results are not at odds with the theory. Both insider tenure and insider control can be good things in the context of the Fama and Jensen view of corporate governance. They suggest that it is important that both top and lower level managers be represented. However, insider control can also spell out board capture. The circumstances that separate good from bad are determined by other things like strong outsider influence, which is proxied by insider and outsider turnover. It is not necessarily how many outside directors are present on the board but the role that outsiders are allowed to play in influencing managerial decision making that is important to shareholder welfare.

As a final point, the policy implications of our results are not obvious. We find that poorly managed companies have outsiders on the board who recognize the failure of management and reveal this by “voting with their feet” as suggested by Mace (1971) and Jensen (1993). We do not find that more outsiders are good or that there is any other magical cure for poor management, save possibly that board size should be smaller. Our results say that it is most important that outside directors be listened to, but this is a hard edict to implement by regulatory fiat.

If such a result is to be accomplished, then it will be necessary to make it very costly for outside directors to exit the board and hence more likely that they will voice their opinion. As our results indicate one way of doing this would be to increase director holdings or resurrect the active investor as Jensen (1993) suggests. An alternative is to allow representatives from corporate bondholders, large corporate customers, and large corporate suppliers to serve as outside directors. Each of these groups have an incentive to force the frank, open discussions necessary to make the board operate effectively. Our results suggest that fewer, as opposed to more, restrictions on whom can serve as corporate directors is likely to lead to improved corporate performance.

References on Board Literature

- Asquith, P., R. Brunner, and D. Mullins, 1987, “Merger returns and the form of financing, Unpublished Manuscript, Harvard University.
- Berle, A., and G. Means, 1932, *The modern corporation and private property*, (Macmillian, New York, New York).
- Bhagat, S., A. Shleifer, and R. Vishny, 1990, Hostile takeovers in the 1980s: The return to corporate specialization, *Brookings Papers on Economic Activity*, 1-84.
- Brickley, J., and C. James, 1987, The takeover market, corporate board composition, and ownership structure: The case of banking, *Journal of Law and Economics*, 30, 161-180.
- Brickley, J., R. Lease, and R. Smith, 1988, Ownership structure and voting on antitakeover amendments, *Journal of Financial Economics*, 20, 267-291.

- Byrd, J. and K. Hickman, 1992, Do outside directors monitor managers? Evidence from tender offer bids, *Journal of Financial Economics*, 32, 195-221.
- Eisenberg, M., 1976, *The structure of the corporation: a legal analysis*, (Little, Brown, and Co., Boston, Mass.
- Fama, E., 1980, Agency problems and the theory of the firm, *Journal of Political Economy* 88, 288-307.
- Fama, E. and M. Jensen, 1983a, Separation of ownership and control, *Journal of Law and Economics* 26, 301-325.
- Fama, E. and M. Jensen, 1983b, Agency problems and residual claims, *Journal of Law and Economics* 26, 327-349.
- Gilson, S., 1990, Bankruptcy, boards, banks, and blockholders, *Journal of Financial Economics* 27, 355-387.
- Hausman, J., 1978, Specification tests in economics, *Econometrica*, 46, 1251-1271.
- Hermalin and Weisbach, 1991, The effects of board composition on corporate performance, *Financial Management*, 20, 101-112.
- Jensen, M., 1989, The Eclipse of the Public Corporation, *Harvard Business Review* 67, 61-74.
- Jensen, M., 1993, The Modern Industrial Revolution. Exit, and the Failure of Internal Control Systems, *Journal of Finance* 48, 831-879.
- Johnson, E., 1990, An insider's call for outside direction, *Harvard Business Review* 68, 46-55.
- Kaplan, S. and D. Reishus, Outside directorships and corporate performance, *Journal of Financial Economics* 27, 389-410.
- Mace, M., 1971, *Directors: myth and reality* (Harvard Business School Press, Boston, MA)
- Maloney, M., R. McCormick, and M. Mitchell, 1991, Managerial decision making and capital structure, working paper, Clemson University.
- Mitchell M., and K. Lehn, 1990, Do bad bidders become good targets, *Journal of Political Economy* 98, 372-397.
- Morck, R., A. Shleifer, and R. Vishny, 1988, Management ownership and market valuation: An empirical analysis, *Journal of Financial Economics*, 20, 293-316.
- Myers, S. and N. Majluf, 1984, Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics*, 13, 187-221.
- Nader, R., M. Green, and J. Seligman, 1976, *Taming the Giant Corporation*, (W.W. Norton Co., New York, New York).
- Peterson, S., 1977, *Canadian directorship practices: a critical self examination*, (The Conference Board of Canada).
- Roll, R., 1986, The hubris hypothesis of corporate takeovers, *The Journal of Business*, 59, 197-216.
- Rosenstein, S. and J. Wyatt, 1990, Outside directors, board independence, and shareholder wealth, *Journal of Financial Economics* 26, 175-191.
- Smith, A., 1776, *An inquiry into the nature and causes of the wealth of nations*, 1976 Reprint (Univ. of Chicago Press).
- Spencer, A., 1983, *On the edge of the organization*, (Wiley, London).
- Travlos, N., 1987, Corporate takeover bids, methods of payment, and bidding firms' stock returns, *Journal of Finance*, 42, 943-963.
- Warner, J., R. Watts, K. Wruck, 1988, Stock prices and top management changes, *Journal of Financial Economics* 20, 461-492.
- Weisbach, M., 1988, Outside directors and ceo turnover, *Journal of Financial Economics* 20, 431-460.

TABLE I

Summary Statistics for Acquisitions

| | Mean | Median | Std Dev | Maximum | Minimum |
|---------------------|--------|---------|---------|---------|---------|
| Acquisition Returns | | | | | |
| All Firms | 0.0076 | -0.0001 | 0.0667 | 0.2236 | -0.2285 |
| Group G Firms | 0.0572 | 0.0490 | 0.0471 | 0.2236 | 0.0025 |

| | | | | | |
|---------------|---------|---------|--------|---------|---------|
| Group B Firms | -0.0421 | -0.0272 | 0.0417 | -0.0001 | -0.2285 |
|---------------|---------|---------|--------|---------|---------|

Percentage Cash used in
Financing Acquisitions

| | | | | | |
|---------------|--------|--------|--------|--------|--------|
| All Firms | 0.8401 | 1.0000 | 0.3285 | 1.0000 | 0.0000 |
| Group G Firms | 0.9270 | 1.0000 | 0.2162 | 1.0000 | 0.0000 |
| Group B Firms | 0.7532 | 1.0000 | 0.3946 | 1.0000 | 0.0000 |

TABLE II

Summary Statistics for Variable measuring
Corporate Board Structure

| Variable | Mean | Median | Std Dev | Maximum | Minimum |
|----------|------|--------|---------|---------|---------|
|----------|------|--------|---------|---------|---------|

Full Sample

| | | | | | |
|--------------------------------------|--------|--------|--------|--------|--------|
| Insiders as a % of All Directors | 0.3491 | 0.3333 | 0.1367 | 0.6875 | 0.1429 |
| Director Holdings of common stock | 0.0876 | 0.0342 | 0.1281 | 0.5947 | 0.0005 |
| Outsider Age | 59.098 | 59.000 | 3.6305 | 70.125 | 47.250 |
| Insider Age | 57.124 | 57.400 | 4.8624 | 68.000 | 42.000 |
| Outsider Turnover | 0.0717 | 0.0643 | 0.0565 | 0.3472 | 0.0000 |
| Insider Turnover | 0.0765 | 0.0833 | 0.0707 | 0.2708 | 0.0000 |
| Other Directorships | 2.0693 | 2.0000 | 0.9692 | 4.3571 | 0.2000 |
| Board Size | 11.660 | 11.000 | 3.248 | 21.000 | 6.0000 |

Group G Firms

| | | | | | |
|-------------------|--------|--------|--------|--------|--------|
| % Insiders | 0.3538 | 0.3333 | 0.1448 | 0.6875 | 0.1429 |
| Director Holdings | 0.1067 | 0.0326 | 0.1495 | 0.5947 | 0.0008 |
| Outsider Age | 59.455 | 60.000 | 4.1643 | 70.125 | 47.250 |
| Insider Age | 56.869 | 57.500 | 5.0609 | 66.500 | 45.000 |

| | | | | | |
|------------------------|--------|--------|--------|--------|--------|
| Outsider Turnover | 0.0578 | 0.0436 | 0.0604 | 0.3472 | 0.0000 |
| Insider Turnover | 0.0767 | 0.0833 | 0.0715 | 0.2708 | 0.0000 |
| Other Directorships | 1.9836 | 2.0000 | 0.9856 | 4.3570 | 0.3330 |
| Board Size | 10.868 | 11.000 | 3.0699 | 18.000 | 6.0000 |

Group B Firms

| | | | | | |
|------------------------|--------|--------|--------|--------|--------|
| % Insiders | 0.3444 | 0.3125 | 0.1294 | 0.6667 | 0.1667 |
| Director Holdings | 0.0684 | 0.0343 | 0.1002 | 0.4284 | 0.0005 |
| Outsider Age | 58.741 | 58.778 | 2.9357 | 64.700 | 49.750 |
| Insider Age | 57.379 | 57.857 | 4.6899 | 68.000 | 42.000 |
| Outsider Turnover | 0.0856 | 0.0783 | 0.0491 | 0.2054 | 0.0000 |
| Insider Turnover | 0.0763 | 0.0833 | 0.0704 | 0.2333 | 0.0000 |
| Other Directorships | 2.1549 | 2.1538 | 0.9540 | 3.8571 | 0.2000 |
| Board Size | 12.543 | 12.000 | 3.2556 | 21.000 | 6.0000 |

TABLE III
The Relation between Corporate Board Structure
and Acquisition Returns^a

| Variable | Coeff/(t-stat) | Coeff/(t-stat) |
|--|--------------------|--------------------|
| Intercept | 0.0322 (1.12) | 0.0258 (0.91) |
| Inside Directors less than 27% ^b | -0.0093 (0.61) | -0.0080 (0.53) |
| Inside Directors greater than 40% ^c | 0.0123 (0.79) | 0.0128 (0.82) |
| Director Stock Holdings less than 1% ^d | -0.0484 (2.99)* | -0.0484 (2.92)* |
| Director Stock Holdings greater than 10% ^e | -0.0003 (0.02) | -0.0022 (0.14) |
| Outsider Turnover | -0.0469 | |

| | | |
|--|---------------------|----------------------|
| | (1.64) | |
| Insider Turnover | 0.0440 (1.93)*** | |
| High Outsider Turnover ^f | | -0.0258 (2.00)** |
| High Insider Turnover ^g | | 0.0265 (1.99)** |
| Board Size | -0.0068 (3.08)* | -0.0062 (2.92)* |
| Other Directorships | 0.0156 (1.85)*** | 0.01472 (1.77)*** |
| Percentage of Purchase paid for with Cash | 0.0400 (2.19) | 0.0402 (2.21)*** |
| <hr/> | | |
| R ² | 0.2536 | 0.2613 |
| # of observations | 106 | 106 |
| <hr/> | | |

Notes to Table III:

^a The dependent variable is the three-day, abnormal return associated with each firm's acquisition announcement at time. The level of statistical significance of the coefficients is indicated by stars marking the *t*-statistics, which are shown in parentheses below the coefficients. One star indicated the 1 percent level of significance; two stars, 5 percent; three stars, 10 percent.

^b Inside Directors less than 27% is equal to one if the percentage of the board composed of insiders is less than 22% and 0 otherwise.

^c If the percentage of the board composed of inside directors is greater than 27%, then Inside Directors greater than 27% equals one, else the variable is equal to zero.

^d The variable Director Holdings less than 1% equals the percentage of the company's common stock owned by all board members if that percentage is less than 1% and 0 otherwise.

^e If the percentage of the firm's common stock owned by all board members is greater than 10%, then Director Holdings greater than 10% is equal to one, else it is equal to 0.

^f If the firms average annual outside director turnover exceeds 6.5%, then this variable is equal to one, else this variable equals zero.

^g If the firms average annual inside director turnover exceeds 8.4%, then this variable is equal to one, else this variable equals zero.