

THE ADOPTION OF SUPERMAJORITY-INDEPENDENT BOARDS IN THE POST-ENRON ERA

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Abstract

Combining insights from the agency theory and sociopolitical perspectives, this study examines the extent to which factors such as ownership structure, CEO power, and firm performance influence firms' adoption of board independent reform advocated by shareholder activists. Event history analysis using extensive data on 1083 Standard & Poor's 1500 companies from January 2002 to December 2004 shows that firms with more powerful CEO were less likely to adopt supermajority-independent boards, while both poorly performing firms and large firms were more likely to adopt such board structure. We also find that higher institutional blockholder ownership increased the likelihood of the adoption in firms managed by less powerful CEOs, while external non-institutional blockholder ownership decreased the likelihood of the adoption.

Keywords: Ownership Structure, CEO Power, Supermajority-Independent Boards

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Introduction

As a reaction to the recent string of massive corporate failures, such as Enron, the New York Stock Exchange (NYSE), the NASDAQ Stock Market (NASDAQ), and the American Stock Exchange (AMEX) adopted more stringent rules for board independence, which include requiring that the board of directors of a listing company consist of a majority of independent directors. Given the perceived important role of independent directors, it is likely that companies will face growing pressure from shareholder activists to adopt a board structure with a greater proportion of independent directors, which goes beyond the existing mandatory requirements. However, there is considerable variation among U.S. corporations in the adoption of this beyond-compliance board structure. What factors drive firms to the adoption of supermajority-independent boards? This study seeks to address this strategic issue by developing and testing a theoretical framework that combines insights from the agency theory and sociopolitical perspectives.

The dominant theoretical perspective in the corporate governance literature is an agency theory perspective, which also dominates corporate practice (Daily, Dalton, Ellstrand and Johnson, 1998; Daily,

Dalton and Cannella, 2003). The perspective is generally concerned with the monitoring mechanisms and incentive compensation arrangements that align the interests of principals (shareholders) and agents (managers). From an agency theory perspective, corporate boards of directors, who are legally responsible for representing stockholders' interests, serve as the ultimate internal control mechanism in publicly-held corporations (Mizruchi, 1983; Walsh and Seward, 1990; Zahra and Pearce, 1989). Agency theorists believe that managers' self-serving behavior can be effectively monitored by the board of directors, especially when the board is comprised of a greater proportion of independent directors (Mizruchi, 1983; Lorsch and MacIver, 1989). When compared to independent directors, inside directors face an obvious conflict of interest when monitoring management, as they are obliged to the CEO for their employment status in the firm (Zajac and Westphal, 1994). Independent directors, being free from inherent conflicts of interest, are able to provide more objective oversight of firm and managerial performance, and thus are in a better position to protect shareholder interests (Fama, 1980; Fama and Jensen, 1983). In addition to the board of directors, concentrated ownership is considered to be another key governance mechanism in the agency framework

that will limit managerial opportunism, since large-block shareholders have both the incentive and the ability to monitor management than owners with small shareholdings (Demsetz and Lehn, 1985).

Typically concerned with promoting efficiency of the contractual arrangements between principals and agents, traditional agency theory tends to neglect issues of power and politics in realities of corporate governance (Baker, Jensen, & Murphy, 1988; Jensen & Murphy, 1990; Zajac & Westphal, 2002). According to a sociopolitical perspective, organizational actions are shaped by power struggles for dominance among various parties with potentially competing goals, and the party who wins control of the firm may direct organizational decisions (Pfeffer, 1981). Different parties in an organization can have divergent interests and that these interests may reflect sociopolitical forces rather than mere economic rationale (Davis and Thompson, 1994; Zajac & Westphal, 1996; Fiss & Zajac, 2004).

Combining insights from the agency theory and sociopolitical perspectives, this study seeks to develop a theoretical explanation that gives much closer attention to the sociopolitical aspects of firm's adoption of board independent reform advocated by shareholder activists. More specifically, we examine the extent to which factors such as ownership structure, CEO power, and firm performance influence the adoption of supermajority-independent boards by American corporations in the post-Enron era.

Hypotheses Development

Ownership Structure

Institutional Ownership

The ownership structure of model U.S. corporations was once characterized by Berle and Means (1932) as 'dispersed', as the control of the firm shifted from owners to professional managers. The dispersed stock ownership results in weak shareholder influence and interest, and leaves the management, particularly the CEO, with substantial discretion to pursue their own interests. In the last two decades, however, ownership of many large corporations has become concentrated in the hands of institutional investors, which presents the potential for increased owner power on limiting managerial discretion (Useem, 1993).

With few exceptions (e.g. Brickley et al., 1988; Kochhar and David, 1996; David, Kochhar and Levitas, 1998; Bushee 2001), most research on institutional investors has treated institutional investors as a homogeneous group with respect to corporate governance. However, different types of institutional investors are likely to demonstrate diverse attitudes and behaviors toward corporate governance caused by differences in their goals and abilities (Black, 1992). Following Bushee (2001), we

classify institutional investors into short-term and long-term oriented institutions based on their past trading behavior. Short-term oriented institutions are transient institutions that are characterized by high portfolio turnover and highly diversified holdings. They tend to follow trends in the market and make investments based on the short-term trading profits. This short-term investment horizon results in less commitment by institutions to firms in the long run and thus impedes their involvement in corporate governance. In contrast, long-term oriented institutions are composed of dedicated and quasi-indexer institutions. Dedicated institutions are characterized by low portfolio turnover and large stakes in a small number of portfolio firms. They cannot exit easily by selling large blocks of stock without depressing the share price and suffering further losses (Davis and Thompson, 1994). Quasi-indexer institutions are also characterized by low portfolio turnover, but they tend to make indexing or make buy-and-hold investments in a broader set of firms. Although quasi-indexer institutions have a passive investment strategy, they have a long time framework for their investments, making it hard to walk away from badly managed companies (Monks and Minow, 1996; Brown, 1998). As such, both dedicated institutions and quasi-indexer institutions are long-term oriented institutional investors, who are committed to provide long-term patient capital (Porter, 1992). They should therefore be more focused on long-run value and be more likely to press for more independent boards.

Hypothesis 1: Firms with higher long-term oriented institutional ownership will be more likely to adopt supermajority-independent boards.

External Blockholder Ownership

Having claims on a large fraction of corporation equity, large block holders tend to have the incentives to use the power gained from their ownership stakes to counteract managerial influence (Alchian and Demsetz, 1972; Shleifer and Vishny, 1986). Also, given that large shareholders cannot easily sell off their holdings for short-term gains (Holderness and Sheehan, 1988), it is in their long-term interests to actively monitor management. In contrast, shareholders with relatively small holdings have few incentives to participate in corporate governance, because they only capture a small proportion of the benefits produced (Shleifer and Vishny, 1989) and have greater mobility. Since any gains from expenditure on participating in corporate governance are available to all shareholders regardless of whether they have incurred the costs, dispersed shareholders tend to free ride in the corporate governance process (Brickley et al., 1988). In addition, small shareholders often lack the necessary information and power to monitor management and influence managerial

decisions (Brickley et al., 1988; Tuschke and Sanders, 2003).

Taken together, under conditions of higher external blockholder ownership, firms are more likely to adopt supermajority-independent boards. Since it is commonly perceived that greater proportion of independent directors on the board can improve corporate governance and thus enhance shareholder value, concentrated ownership offers strong incentive and power to external shareholders to demand the adoption of best practices. That is, one would expect that firms with higher external blockholder will be more likely to adopt supermajority-independent boards. On the other hand, however, unlike individual shareholders, institutional investors are financial intermediaries between owners of shares and the companies owned, and they are obligated to take proactive actions in influencing corporate management to maximize the investment returns on behalf of their clients. To gain a more fine-grained understanding of the effect of different types of blockholder ownership, we distinguished external non-institutional blockholder ownership and institutional blockholder ownership in the following hypotheses:

Hypothesis 2: Firms with higher external non-institutional blockholder ownership will be more likely to adopt supermajority-independent boards.

Hypothesis 3: Firms with higher institutional blockholder ownership will be more likely to adopt supermajority-independent boards.

CEO Power

While agency theory suggests that the board of directors represents a primary control mechanism acting in the interests of shareholders (Jensen and Meckling, 1976), decades of organizational theory and business management research demonstrate that the board is in fact dominated by management, despite its formal governing power over management (e.g. Mace, 1971; Herman, 1981; Wade, O'Reilly and Chandratat, 1990). Among various factors that may facilitate management control over the board, the CEO's dominance over the director selection process has been considered a primary source of management control (Westphal and Zajac, 1995). Recently adopted stock exchange requirements that seek to increase the role of independent directors in director nomination may weaken but do not eliminate CEOs' influence over director nominations. The firm's nominees for director positions are still typically proposed by management, and the board is in close coordination with the inside management rather than shareholders in the process of preparing and reviewing the nominees' list (Montgomery and Kaufman, 2003; Bebchuk and Fried, 2004). While CEOs remain considerable influence over their board, we expect that more powerful CEOs will be more successful in

pursuing strategies which serve their own interests. Therefore:

Hypothesis 4: Firms with more powerful CEOs will be less likely to adopt supermajority-independent boards.

Firm performance

Poor firm performance may also induce changes in corporate governance structure. When firm performance is high, shareholders may perceive that the firms' management is legitimate and that there is little need to closely control the CEO, as interference with CEO decisions would lead to a loss of efficiency and profits (Herman, 1981). In contrast, poor firm performance can pose threats to organizational and governance legitimacy. Under conditions of poor firm performance, affected external owners are expected to exert greater coercive pressure for governance changes aiming to improve firm performance. Indeed, some recent studies show that institutional investors pay more attention on poorly performing companies (compared to the market or industry peers) and press for governance changes to improve performance in the future (Karpoff, Malatesta and Walkling, 1996; Del Guercio and Hawkins, 1999; Gillan and Starks, 2000). In addition, corporate boards are more active in exercising their legal power in response to serious setbacks to the company (Zald, 1969; Mace, 1971; Herman, 1981; Harrison et al., 1988; Lorsch and MacIver, 1989). Because institutional investors and the board usually compare firm performance to the industry average performance (Fredrickson, Hambrick and Baumrin, 1988; Useem et al., 1993), firms with performance below the industry average are likely to face higher pressure to adopt. Therefore,

Hypothesis 5: Firms with lower performance will be more likely to adopt supermajority-independent boards.

In sum, we predicted that ownership structure, CEO power, and firm performance will influence firms' likelihood of adopting supermajority-independent boards. Based on the logic for each proposition developed above, we also expect that there will be interaction effects between CEO power, ownership structure, and firm performance. For example, the presence of less powerful CEOs will increase the effect of external blockholder ownership and the effect of firm performance on firms' likelihood of adopting supermajority-independent boards, etc. Therefore, in addition to investigate each of our hypotheses that predicts the first order effects for ownership structure, CEO power, and firm performance, the analysis we present in the following sections also explore potential interaction effects between these factors on the adoption of supermajority-independent boards.

Data and Methods

Sample

The sample consists of 1083 firms listed in the S&P 1500 Index throughout the years from January 2002 to December 2004. Data on the adoption of supermajority-independent boards were collected from the U.S. Corporate Governance Quotient (CGQ) database provided by Institutional Shareholder Services (ISS).

Dependent Variable

The dependent variable in this study is the adoption of a supermajority-independent board structure with at least 75 percent of independent directors on the board. We used a dummy variable to indicate whether a firm had adopted such structure. If a firm had adopted the structure, the variable is coded one and zero otherwise.

Independent Variables

Long-term oriented institutional ownership: Based on Bushee's (2001) trading orientation classification of institutional investors, dedicated and quasi-indexer institutions were classified as long-term oriented institutions and transient institutions were classified as short-term oriented institutions. The shares held by long-term oriented institutions as a percentage of total institutional ownership of the firm were calculated and used to test the effect for long-term oriented institutional ownership.

External blockholder ownership: In this paper, external blockholders are defined as non-management individuals or groups holding five percent or more of a company's shares. This five percent cutoff is the most used indicator for shareholders ability to monitor and control management in previous research (Hunt, 1986; Tosi and Gomez-Mejia, 1989; Davis, 1991; Hambrick and Finkelstein, 1995; Werner and Tosi, 1995; Gedajlovic and Shapiro, 1998). We disaggregated external blockholder ownership into two categories: (1) external non-institutional blockholder ownership, measured as the percentage of aggregated ownership held by external individuals (including non-management directors) maintaining five percent or more of a given company's shares, and (2) institutional blockholder ownership, that is, the percentage of aggregated ownership held by institutions that own at least five percent of the company's shares. This disaggregation may provide useful information regarding the potential difference between individual blockholders and institutional blockholders, since institutional investors as financial intermediaries may have different goals and obligations from individual investors. The data on external non-institutional blockholder ownership were collected from proxy statement, and the data on institutional ownership were gathered from Thomson Financial Institutional (13f) Holdings database.

To gain a better understanding of the role of institutional investors on the adoption of supermajority-independent boards, we also included institutional non-blockholder ownership, accounting for the percentage of aggregated institutional ownership by institutions holding less than five percent of the given company's shares.

CEO power: We used three different indicators of CEO power: CEO duality (where individual simultaneously serves as both CEO and chair of the board), CEO tenure (measured by the number of years that the CEO has held his or her current position), and CEO stock ownership (measured by the percentage of a company's shares held by the CEO). These three indicators are among the most widely used indicators of CEO influence in previous research (Allen, 1981; Finkelstein and Hambrick, 1989; Wade et al., 1990; Finkelstein, 1992; Westphal and Zajac, 1995; Zajac and Westphal, 1996; Elhagrassy et al., 1999). CEO duality is coded as a binary variable. If the person has a combined CEO/board chair position, this variable is coded as one and zero otherwise. Data on CEO duality, tenure and ownership are collected from COMPUSTAT ExecuComp, supplemented by proxy statements.

Firm performance: Two firm performance measures obtained from COMPUSTAT Annual Industry database - return on assets (ROA) used as the measure of operating performance and total return to shareholders used as the measure of stock performance were adjusted by industry following the procedure suggested by Vasconcellos and Hambrick (1989): The difference between each firm's own performance and its industry average for firms in COMPUSTAT Annual Industry database (defined at the two-digit SIC code) was computed, then divided by the industry average. This value indicates how much better or worse a firm performed compared to its industry. Thus, it should be noted that the findings of this study on firm performance show effects of firm performance relative to the industry average.

Control Variables

Firm size: Firm size was controlled because large firm size may reduce managers' risks of undiversified personal portfolios (Amihud and Lev, 1981) and increase their prestige (Marris, 1964). Therefore, CEOs of large firms may have more power than their counterparts in smaller firms and accordingly be in a better position to further their own interests. On the other hand, because large firms are more visible to the public, they may be more exposed to political scrutiny and public pressure (e.g., Aerts, Cormier and Magnan, 2007), which may have some influence on managerial decisions and action. Firm size was measured with the logarithms of net sales. Data came from COMPUSTAT Annual Industry database.

Board size: Board size was measured as the number of members of the board of directors. While some

argue that smaller boards are often more cohesive and function more efficiently than larger boards in monitoring management (Mintzberg, 1983; Lipton and Lorsch, 1992; Jensen, 1993), others assert larger boards increase expertise and are less susceptible to managerial domination (Zahra and Pearce, 1989; Singh and Harianto, 1989). As there is no apparent consensus, we included board size as a control variable in this study.

The prevalence of adoption in industry: Adoption prevalence was measured by the percentage of firms in its industry (based on firms' two-digit SIC codes) that had adopted the provision as of the beginning of the year. According to DiMaggio and Powell (1983), firms tend to imitate similar others that they perceive to be more legitimate and successful. That is, firms are more likely to adopt structures or policies when the adoption becomes prevalent and normative in their industry (Fligstein, 1985; Palmer, Jennings and Zhou, 1993). Therefore, we include this adoption prevalence in industry variable in the analysis, and expect this variable will be positively related to firms' likelihood to adopt supermajority-independent boards.

The following variables are also controlled in the analysis: CEO turnover, industry membership based on firms' two-digit SIC codes, year, and stock exchanges firms traded on.

Data on firms' SIC codes and stock exchange codes from COMPUSTAT Annual Industry database. Data on CEO turnover are collected from COMPUSTAT ExecuComp, supplemented by proxy statements. Data on board size are collected from Compact Disclosure database. Table 1 gives a summary of variable definitions. Dummy variables on year, stock exchange, and industry are not presented to save space.

Insert Table 1 about here

It should be noted that there are firms that had dual-class common stock in the sample. As firms' two (or more) classes of common stocks have unequal voting rights, i.e., each class of common stock has a different number of votes per share, we coded all the ownership variables for such firms (including external non-institutional blockholder ownership, institutional blockholder ownership, institutional non-blockholder ownership, and long-term oriented institutional ownership as a percentage of total institutional ownership) as missing data.

Method of Analysis

We tested the hypotheses on the likelihood of adopting supermajority-independent boards using event-history analysis. Event-history analysis is ideal for studying the rate of a qualitative variable's transition from one state to another (Tuma and Hannan, 1984; Allison, 1984). Many previous studies have used this technique to analyze the adoption of

certain corporate policies or structures (Davis, 1991; Tuschke and Sanders, 2003; Fiss and Zajac, 2004). In this case, the transition of interest is the adoption of a corporate governance reform. The data were split into year-long episodes, or spells, so that covariates can be updated on an annual basis. The 1083 firms in our sample followed for three, one-year intervals beginning January 2002 and ending December 2004, accumulating 4332 pooled firm-year observations. To capture possible time dependence in adoption rates, we added three dummy variables (i.e. 2002 year interval, 2003 year interval, and 2004 year interval) indicating the time interval of each observation in the analysis.

Table 2 presents means, standard deviations, and correlations for the independent and control variables used in the analysis. Year interval, stock exchange, and industry dummies are not reported here to save space. Adoption prevalence is not reported in the table because it varied with dependent variable in each year and each industry, but is described in Figures 1a and 1b. It should be noted that the descriptive statistics summarized pooled firm-year data and the means are calculated across all firm-year data. However, the actual statistics change with the dependent variable, because risk sets change over time for the dependent variables as structural changes are made. The adoption behavior is described in Table 3 and Figures 1a and 1b. Specifically, Table 3 shows the number of firms in each state at the beginning of the year and the number of firms that change states each year in both directions. For each state at the beginning of the year, firms that did not adopt the reform are coded as 0 and 1 otherwise. Figure 1a illustrates the percentage of firms that changed states out of firms at risk in each year interval in both directions. Figure 1b shows the percentage of firms that adopted the reform in the end of each year.

Insert Table 2, Table 3, and Figures 1a and 1b about here

Models were estimated using the exponential hazard rate model for the rate of the adoption:

$$\ln r(t) = \sum_{i=0}^k \beta_i x_i,$$

where the x_i are the k covariates and x_0 is set to one so that β_0 is the constant term. Models were estimated using the "streg" routine in Stata.

We used seven models to show the first-order effects for each dependent variable, with the main independent variables differing across each model from Model 2 to Model 6. The first model in each set is a baseline model that only contains control variables. Stock exchange and industry dummies are not shown in the tables to save space. The second

model focuses on the effect of firm performance, indicated by return on assets and total shareholder returns. The third model tests the effect of CEO power, using the three most widely used measures, i.e., CEO duality, CEO tenure, and CEO ownership. The fourth model examines the effect of external non-institutional blockholder ownership. In the fifth model, we then disaggregate institutional ownership into two subgroups based on shareholdings: institutional blockholder ownership and institutional non-blockholder ownership. This disaggregation is useful because it not only shows the information on the effects of institutions with or without large shareholdings, but also allow for a more nuanced examination on the role of external blockholders by making the distinction between institutional blockholders and external non-institutional blockholders. The sixth model examines the effect of the long-term oriented institutional investors on the adoption. By distinguishing between short-term and long-term oriented institutions, we explicitly examined how these groups' different trading behaviors influence their roles in influencing the adoption of supermajority-independent boards. Long-term oriented institutional ownership as a percentage of the total institutional ownership was used to test this effect. Model 7 is a comprehensive model that composed of all the independent variables and control variables.

In addition, exploratory studies were conducted to investigate interaction effects between CEO power, ownership structure, and firm performance on the adoption of supermajority-independent boards. That is, we tested different combinations of interactions between these three variables in order to explore potentially significant joint effects.

Results

Table 4 shows the results of event history analysis of adoption of supermajority-independent boards. Due to the large number of variables, coefficients for stock exchange and industry dummies are not reported in the tables.

Insert Table 4 about here

Model 1 includes only control variables. The significant and positive coefficient on the firm size variable indicates that firms with poor performance would be more likely to adopt a supermajority-independent board structure. A significant and negative coefficient on adoption prevalence in industry means that a firm was less likely to adopt a supermajority-independent board structure when there were a higher percentage of firms that had adopted this structure in its industry. CEO turnover was found to be significantly and positively related to the

adoption, suggesting that firms tended to be more likely to adopt the structure when there was a CEO turnover. Results also show that the likelihood of a firm's adoption was significantly increased year over year during the observation period.

Model 2 estimates the effect of firm performance adding two firm performance measures, ROA and total shareholder returns, to the baseline Model 1. The results show that total shareholder returns had a significant and negative effect on the adoption, while no significant effect was found on the return on assets variable. Model 3 tests the influence of CEO power on the adoption of a supermajority-independent board structure. The results show both CEO tenure and CEO ownership had a significant and negative effect on the adoption, while CEO duality had a significant and positive effect on the adoption. It suggests that firms managed by CEOs with longer tenure or higher ownership were less likely to adopt, while firms managed by CEOs who also served as board chair were more likely to adopt. In Model 4, the significant and negative coefficient on external non-institutional blockholder ownership suggests that firms with higher external non-institutional blockholder ownership tended to be less likely to adopt supermajority-independent boards. Model 5 shows that institutional blockholder ownership had a significant and positive effect on the adoption, suggesting that firms with higher institutional blockholder ownership would be more likely to adopt. As shown in Model 6, no significant result was found on the long-term oriented institutional ownership variable, that is, the proportion of the long-term oriented institutional ownership in the total institutional ownership had no significant influence on the adoption.

As discussed above, Models 2 to 6 illustrate separate contribution of every set of independent variables to the control Model 1. As opposed to Model 1, the overall fit of all the other models except Model 6 improved significantly².

Model 7 presents a more comprehensive model that includes all the independent variables and control variables. Firm size had a positive and significant coefficient, indicating that larger firms were more likely to adopt the reform. The significant and negative coefficient for the adoption prevalence variable indicates that firms were less likely to adopt the reform if there were higher percentage of other firms who had adopted in their industry. Results also show that the adoption rate of firms was significantly increased over time. While the coefficient for CEO duality is significant in Model 3, it is no longer significant in the more comprehensive Model 7. The coefficients for CEO tenure and CEO ownership keep significant and negative in Model 7, suggesting that firms managed by more powerful CEOs with longer tenure or higher ownership were less likely to adopt the reform. In addition, the coefficient for external non-institutional blockholder ownership is significant

and negative, which indicates firms with lower external non-institutional blockholder ownership tended to be more likely to adopt. The coefficient for institutional blockholder ownership is in the predicted direction, but it is only significant in Model 5 and not significant in Model 7. Again, the proportion of long-term oriented institutional ownership in the total institutional ownership was found to have no significant effect on the adoption. As with other control variables, CEO turnover, industry dummies, and stock exchange dummies were not significant. To further assess the effect for external non-institutional blockholder ownership, we conducted additional analysis (not reported here) in which we substituted external non-institutional blockholder ownership for the numbers of external non-institutional blockholders. The analysis shows that firms with more external non-institutional blockholders would decrease the likelihood of the adoption of a supermajority-independent board. We also substituted the long-term oriented institutional ownership as a percentage of total institutional ownership for the percentage of company's shares held by long-term oriented institutional ownership, and the alternative model yielded similar null results.

As shown in Model 7, the non-significant findings for the effect for long-term oriented institutional ownership suggest that Hypothesis 1, which predicted that long-term oriented institutional ownership would increase a firm's likelihood to adopt a supermajority-independent board, is not supported. Contrary to hypothesis 2, firms with higher external non-institutional blockholder ownership tended to be less likely to adopt a supermajority-independent board rather than more likely to adopt. Hypothesis 3 receives only weak support because the results show that institutional blockholder ownership had marginally significant effect on the adoption after counting for other effects in Model 7. Hypothesis 4 is supported, as both CEO tenure and CEO ownership had a significant and negative effect on the likelihood of the adoption. Additional analysis using alternative CEO ownership measure, the raw value of the CEO's stock holdings take the log, yielded the same significance pattern. Hypothesis 5 is also supported, as the results indicate that total shareholder returns had a significant and negative effect on the adoption.

To explore the potential interaction effects, different combinations between CEO power, ownership structure, and firm performance variables were tested. Models 8 to 10 include the significant interaction effects we found. Model 8 introduces the interaction term between CEO duality and institutional blockholder ownership, and produced significant interaction effects. Model 9 presented the significant interaction effects between CEO tenure and institutional blockholder ownership. The overall fit of Models 8 to 9 improved in comparison with

Model 7. We then added both these interaction terms in Model 10, but they are not significant any longer.

Finally, all the significant direct effects of independent variables on the adoption of the reform are displayed graphically. Since we estimated the models by:

$$\ln r(t) = \sum_{i=0}^k \beta_i x_i$$

then

$$r(t) = \exp\left(\sum \beta_i x_i\right) = \prod_{i=0}^n \exp(\beta_i x_i)$$

So each variable has a multiplicative effect, $\exp(\beta_i x_i)$. When x is not involved in an interaction, the way in which x affects the rate can be shown by graphing $\exp(\beta_i x_i)$ as a function of x_i over the range of x values.

As shown in Model 7, CEO tenure, CEO ownership, external non-institutional blockholder ownership, and total shareholder returns had a significant effect on the adoption of a supermajority independent board. Accordingly, firms with a new CEO doubled the rate of comparable firms with a CEO who held the CEO position for twenty years, as shown in Figure 2. Firms with a CEO who had no ownership of the firm's shares nearly doubled the rate of comparable firms with a CEO who held 10 percent of the firm's shares, as shown in Figure 3. Firms without external non-institutional blockholder ownership roughly doubled the rate of comparable firms with 20 percent of external non-institutional blockholdings, as shown in Figure 4. Firms with total shareholder returns 1600 percent below the industry average adopted at about 5 times the rate of comparable firms with total shareholder returns equal to the industry average, as shown in Figure 5.

The significant interaction effect between CEO duality and institutional blockholder ownership in Model 8 is shown in Figure 6, suggesting that firms with higher institutional blockholder ownership managed by CEOs who did not hold board chair position relative to other firms were more likely to adopt a supermajority-independent board structure. The significant interaction effect between CEO tenure and institutional blockholder ownership in Model 9 is shown in Figure 7, which shows the interaction surface that contains all the necessary information for interpretation. The X and Y axes show the variables in the interaction terms, and Z axis represents the adoption rate. It suggests that firms with higher institutional blockholder ownership managed by CEOs with shorter tenure in relative to other firms were more likely to adopt supermajority-independent boards.

Insert Figures 2 to 7 about here

Discussion

The purpose of this study was to investigate some of the antecedents of the voluntary adoption of supermajority-independent boards by American corporations in the post-Enron era. Our results show both CEO tenure and CEO ownership had a significant and negative effect on the likelihood of a firm's adoption of a supermajority-independent board structure. These results suggest powerful CEOs who had longer tenure or higher ownership tended to oppose the reform of increasing the proportion of independent directors to the supermajority level. These findings could be explained by the agency theory perspective, suggesting that independent directors would be more effective in monitoring corporate management and limiting CEO discretion. Therefore, CEOs have a preference for non-independent directors, and more powerful CEOs are more able to resist this reform. Although the investment community appears to prefer a more independent board structure, more powerful CEOs may be more successful in convincing the board and shareholders to keep the proportion of independent directors only up to the mandatory requirement.

CEO duality was found to have no significant effect on the likelihood of a firm's adoption of a supermajority-independent board structure. This may imply that CEOs who also hold the position of board chair are more able to control the board than those who only hold the CEO position, regardless of the proportion of "independent" directors on the board. Since they are less likely to be threatened by the independent board, CEOs with a dual position have less incentive to resist this reform as do other CEOs. With respect to institutional blockholder ownership, we predicted that it would have a positive effect on the adoption of a supermajority-independent board structure. As we found a marginally significant effect, it suggests that institutional blockholders might have some weak influence on a firm's likelihood of adopting a supermajority-independent board structure.

On the other hand, although neither CEO duality nor institutional blockholder ownership was found to have a direct influence on the adoption of this structure, there was a significant interaction effect between these two variables. Specifically, the findings show that firms with higher institutional blockholder ownership managed by CEOs who did not hold board chair position were more likely to adopt a supermajority-independent board structure. Similarly, we also observed a significant interaction effect between CEO tenure and institutional blockholder ownership, which indicates that firms managed by CEOs with shorter tenure were more likely to adopt supermajority-independent boards when institutional blockholder ownership was higher. In general, these interaction effects suggest that in general institutional investors may be particularly likely to act on the

sociopolitical motives to press for independent board reform discussed earlier when they have the voting power to do so and the presence of CEOs who had shorter tenure or did not hold chair position provides a reinforcing force for change in board structure. It is also interesting to note that we did not find other interaction effects between CEO power, ownership structure, and firm performance, which suggests that the direct effects of CEO ownership, external non-institutional blockholder ownership, and firm performance are more important for predicting firms' adoption of supermajority-independent boards.

In this study, we classified institutional investors into long-term oriented institutions and short-term oriented institutions based on their investment styles (Bushee, 2001). Institutions with the short-term focus are characterized by high turnover and highly diversified holding, while institutions with the long-term focus are characterized by more stability and low portfolio turnover. We predicted that firms with higher long-term oriented institutional ownership would be more likely to adopt a supermajority-independent board structure, as we assumed that long-term oriented institutions might perceive supermajority-independent boards will help to increase long-run value of firms. However, long-term oriented institutional ownership was found to have no significant effect. One possible explanation for this result is that long-term oriented institutions may perceive the adoption of supermajority-independent boards as a short-term strategic move and symbolic action. Long-term oriented institutions are more likely to press for fundamental strategic corporate changes, and thus are less sensitive to short-term strategic moves because they are committed. Indeed, while conventional wisdom favors a board that consists of a greater proportion of independent directors, there is no clear and convincing evidence suggesting that firms with more independent boards achieve better performance (Dalton et al., 1998; Bhagat and Black, 2002).

An interesting finding of this study is that external non-institutional blockholder ownership had a significant but negative effect on the probability of a firm's adoption of a supermajority-independent board structure. This seems to be in conflict with the commonly held assumption that external blockholders have more incentive and power to monitor management. However, it is consistent with Useem (1984)'s research suggesting that large individual owners only act actively when the issue is highly relevant to their immediate economic self-interests. In general, large individual owners do not take active part in influencing management on behalf of more general business interests. In fact, management may have advantages if they have a few large investors whom they can target for influence. That is, the cooptation may apply to big investors like it does for directors (Selznick, 1949). Therefore, firms with

larger external non-institutional blockholder ownership may, in effect, have lower propensity to adopt supermajority-independent boards.

The results show the evidence that total shareholder returns had significant and negative effects on the adoption of a supermajority-independent board while return on assets had no significant effects on the adoption. The significant findings on the total shareholder returns rather than return on assets are not surprising because the total shareholder returns are more directly related to shareholder interests. Firms with lower shareholder returns may adopt more independent board structures as a symbolic gesture of alignment with shareholder interests, as it promotes the appearance of 'good' corporate governance (Harrison, 1987; Westphal and Zajac, 1994).

In addition, larger firms were found to be more likely to adopt a supermajority-independent board structure, which may imply large firms are under higher pressure to conform to institutional norms because they are more exposed to public pressure and investor scrutiny. However, the results show that adoption prevalence in industry had a significant but negative effect on a firm's likelihood of the adoption of a supermajority-independent board structure. This suggests that even though firms on average were adopting the provision, they tended to be less likely to do so when the more other firms in their industries had done so. This may imply firm heterogeneity in response to this practice as some firms would naturally adopt while other firms are very resistant to adopt. It could also be possible that the adoption of this reform became saturated in certain industries such that the adoption rate in those industries went down. On the other hand, it could be that the cumulative effect of all the other variables in the model pulls more strongly in the positive direction so that, after including everything else, this adoption prevalence variable has a less strong effect which shows up as negative by comparison since adoption prevalence is not completely uncorrelated with the other variables.

Limitations and Future Research

Several limitations of this study should be recognized. First, we have focused on the antecedents of the adoption of supermajority-independent boards. Future research could extend this focus by examining the consequences of supermajority-independent boards. For example, it would be useful to empirically test whether supermajority-independent boards will produce better long-term firm performance, especially considering the mixed empirical findings on the impact of majority-independent board on firm performance. This may also help to explain the lack of significant effects for long-term oriented institutional investors on the adoption of supermajority-independent boards in the results of the

current study. In addition, while we have focused specifically on the adoption of supermajority-independent boards, we also noticed that there is significant non-adoption of supermajority-independent boards as shown in Table 3 and Figures 1a and 1b. Another important extension could be made by investigating the factors related to the non-adoption of supermajority-independent boards, which could provide important insights in interpreting the findings of the present study. In particular, this could be very revealing about ownership effects.

Second, we used industry dummy variables (constructed from two-digit SIC codes) to control for potential industry effects in the sample of this study, which includes a broad range of industries. Future research could also examine how industry concentration affects the adoption of such structure in a sample limited to the manufacturing industry based on four-digit SIC codes. This can not only provide a more informative explanation on the industry effect, but can also better control for inter-industry effects and thus provide a more accurate examination of intra-industry heterogeneity among manufacturing firms (Carroll and Hannan, 2000).

Third, as for the exploration of interaction effects, this study has focused on two-way interactions between each indicator of CEO power (i.e. CEO duality, CEO tenure, and CEO ownership), ownership structure, and firm performance. It could be interesting to examine the potential three-way interaction effects, and the interactions between three indicators of CEO power should also be considered in the future study.

Conclusion

This study addresses a critical strategic issue with important theoretical, empirical, and practical implications. Theoretically, in contrast with much of the prior research, which has treated board composition as a given and primarily focused on its implications, we addressed the antecedents of firms' adoption of supermajority-independent boards, which exceeds the majority required by the existing mandatory requirements. In particular, we developed a theoretical explanation that gives much closer attention to the role of sociopolitical factors in determining changes in board composition. We considered not only the power struggle between CEOs and large external shareholders but also the diversity of the interests and power held by large external shareholders. As such, the study extends prior work that has emphasized the role of sociopolitical factors in affecting the diffusion of corporate practices (e.g. Davis, 1991; Palmer et al., 1993; Fiss and Zajac, 2004).

In addition, this study contributes to a better understanding of shareholder heterogeneity. While prior corporate governance studies have generally

limited their analysis to the effects of ownership concentration, assuming that managerial discretion is essentially a negative function of ownership concentration, we suggest that the behaviors of owners may vary both across ownership categories and also within such categories. By distinguishing external non-institutional blockholders and institutional blockholders among large external shareholders, our findings show that in general large institutional investors tend to be more active in pressing for board independence reform than large non-institutional owners, as the latter may only act actively to the issues pertaining to his/her narrow economics interests rather than commit effort to pressing for general corporate governance changes. In addition, while much of the corporate governance literature has typically focused on the implication of the total institutional ownership, we distinguishing between short-term and long-term oriented institutions based on their investment horizons, which enables us to take into consideration how these groups' different trading behaviors influence their roles in influencing the adoption of supermajority-independent boards. Although no evidence was found to support our prediction that institutions with long-term investment horizons are more likely to press for the adoption of supermajority-independent boards, it may imply that this governance reform is mainly symbolic rather than a fundamental change to address shareholder interests. This may provide some evidence that the adoption of supermajority-independent boards could be driven by sociopolitical considerations rather than efficiency maximization as economic theories assumed. Indeed, our findings illustrate that both poor performing and large firms are more likely to adopt such board structure, which could also be explained by the symbolic management perspective. Being more visible to the public and thus more subject to external pressure, one could expect these firms are more likely to adopt for symbolic reasons by displaying the changes that appear to conform to the norms in the investor community.

Empirically, in a notable departure from nearly all previous work on corporate governance, the sample of the study includes a large number of small firms in addition to the very large firms that have been the traditional focus of governance research. This not only addresses the sample selection bias characteristic of previous research, but also promises to reveal new insights into how corporate behavior varies as a function of firm size.

Practically, this study provides a more complete and realistic picture of firms' adoption of supermajority-independent boards. Our findings show that powerful CEOs tend to oppose increasing the proportion of independent boards to the supermajority level, which in a sense may imply such reform would help to improve the monitoring role of the board and thus limit managerial discretion. In the mean time,

however, our findings suggest that CEOs still have considerable power such that powerful CEOs can oppose the reform to protect their own interests. Moreover, powerful CEOs can co-opt big investors as well as directors. In general, our findings show that large institutional investors are more active in pressing for this board reform than large external non-institutional owners. However, the lack of significant effects for long-term oriented institutional investors may cast doubt on whether the adoption of supermajority-independent boards is a short-term strategic move that falls short of genuine improvement to shareholder value.

Notes

1. For example, as for the 2003 year interval, Figure 1a indicates the percentage of firms that changed from adoption to non-adoption out of firms at risk is higher than the percentage of firms that changed from non-adoption to adoption out of firms at risk. It is due to the fact that the risk set of firms that had already adopted the reform at the beginning of the year is smaller than the risk set of firms that had not yet adopted the reform at the beginning of the year, although the actual number of change events from adoption to non-adoption is more than the number of change events from non-adoption to adoption. This also explains why the percentage of firms that adopted the reform was increased during that year interval as shown in Figure 1b.

2. The decrease of the Chi-square in Model 6 is due to losing observation automatically by Stata software, as all the ownership variables were coded as missing for the firms with dual-class common stock.

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Appendices

Table 1. Variable Description

Dependent Variable	Description
Adoption of a supermajority-independent board structure	1= The firm adopted this reform 0= The firm did not adopt this reform
Independent Variables	
CEO duality	1= Combined CEO/Board Chair position 0= Separate CEO/Board Chair positions
CEO tenure	The number of years that the CEO has held his or her current position
CEO ownership	The percentage of a company's shares held by the CEO
External non-institutional blockholder ownership	The percentage of a company's shares held by all large (5 percent or more) external non-institutional shareholders.

Table 1 continued

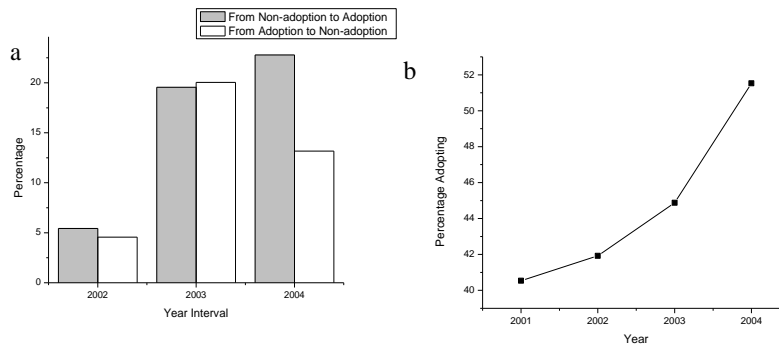
Institutional blockholder ownership	The percentage of a company's shares held by institutional investors owning 5 percent or more of a company's shares
Institutional non-blockholder ownership	The percentage of a company's shares held by institutional investors owning less than 5 percent of a company's shares
Long-term oriented institutional ownership	The shares held by long-term oriented institutional investors divided by total institutional ownership
Return on assets	The difference between each firm's return on assets and its industry average (defined at the two-digit SIC code) divided by the industry average.
Total shareholder returns	The difference between each firm's total shareholder returns and its industry average (defined at the two-digit SIC code) divided by the industry average.
Control Variables	
Firm size	Logarithms of net sales
Board size	The number of members of the board of directors
Adoption prevalence in industry	the percentage of firms in its industry that had adopted the provision as of the beginning of the year
CEO turnover	1= If there was a CEO turnover 0= If there was no CEO turnover
2002 year interval	A dummy variable indicating the observation period is from January 2002 to December 2002
2003 year interval	A dummy variable indicating the observation period is from January 2003 to December 2003
2004 year interval	A dummy variable indicating the observation period is from January 2004 to December 2004

Table 2. Descriptive Statistics and Correlations

Variable	N	Mean	S.D.	1	2	3	4	5	
1 CEO duality	3249	0.63	0.48						
2 CEO tenure	3249	7.85	7.86	0.25					
3 CEO ownership	3144	2.54	6.18	0.09	0.43				
4 External non-institutional blockholder ownership	3144	2.77	7.50	-0.15	-0.06	0.09			
5 Institutional blockholder ownership	3144	15.99	12.09	-0.02	-0.04	-0.08	-0.03		
6 Institutional non-blockholder ownership	3144	50.79	14.34	0.02	-0.07	-0.20	-0.16	-0.12	
7 Long-term oriented institutional ownership	3142	0.58	0.14	0.03	0.03	0.00	0.03	0.04	
8 Return on assets	3239	-0.94	2.83	-0.02	0.01	-0.04	-0.02	-0.07	
9 Total shareholder returns	3239	-2.20	58.77	0.04	0.02	0.00	0.02	0.04	
10 Firm size	3249	20.97	1.45	0.10	-0.07	-0.14	-0.10	-0.17	
11 Board size	3249	9.26	3.22	0.03	-0.06	-0.12	-0.03	-0.20	
12 CEO turnover	3249	0.09	0.29	-0.19	-0.30	-0.07	0.03	0.01	
Variable				6	7	8	9	10	11
7 Long-term oriented institutional ownership			-0.37						
8 Return on assets			-0.06	0.08					
9 Total shareholder returns			-0.02	0.02	0.01				
10 Firm size			0.09	0.20	-0.03	0.01			
11 Board size			-0.08	0.23	0.07	0.01	0.43		
12 CEO turnover			-0.01	0.03	0.03	0.00	0.01	0.06	

Table 3. The Number of Change Events out of Firms at Risk for Dependent Variables

Dependent Variables	Year Interval	2002		2003		2004	
	State at the Beginning of Year	0	1	0	1	0	1
Adoption of a supermajority-independent board structure	Risk Set	644	439	629	454	597	486
	Number of Change Events	35	20	123	91	136	64



Figures 1a and 1b. The Adoption of Supermajority-Independent Boards

Table 4. Event-History Analysis of the Adoption of Supermajority-Independent Boards

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Firm size	0.150** (0.052)	0.155** (0.053)	0.126* (0.055)	0.124* (0.054)	0.165** (0.056)
Board size	0.038 (0.024)	0.035 (0.024)	0.042+ (0.025)	0.044+ (0.025)	0.052* (0.025)
Adoption prevalence in industry	-0.042** (0.014)	-0.045** (0.014)	-0.042** (0.014)	-0.044** (0.014)	-0.043** (0.014)
CEO turnover	0.385* (0.161)	0.395* (0.162)	0.131 (0.180)	0.387* (0.163)	0.381* (0.164)
2003 year interval	1.324*** (0.195)	1.385*** (0.200)	1.373*** (0.200)	1.344*** (0.200)	1.314*** (0.201)
2004 year interval	1.665*** (0.212)	1.728*** (0.218)	1.706*** (0.218)	1.693*** (0.218)	1.681*** (0.218)
Return on assets		0.013 (0.028)			
Total shareholder returns		-0.002** (0.001)			
CEO duality			0.322* (0.138)		
CEO tenure			-0.034** (0.012)		
CEO ownership			-0.081*** (0.024)		
External non-institutional blockholder ownership				-0.042*** (0.012)	
Institutional blockholder ownership					0.016** (0.005)

Table 4 continued

Institutional non-blockholder ownership					0.009 ⁺ (0.005)
Long-term oriented institutional ownership					
CEO duality x Institutional blockholder ownership					
CEO tenure x Institutional blockholder ownership					
Constant	-2.644 (1.742)	-3.177 ⁺ (1.829)	-1.118 (1.883)	-2.781 (1.837)	-3.973* (1.863)
Log-likelihood	-742.83	-732.48	-689.61	-704.09	-706.25
Chi-square	190.21	198.21	235.41	206.45	202.15
D.f.	69	71	71	69	70
N	1870	1865	1793	1793	1793

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
Firm size	0.143** (0.054)	0.121* (0.059)	0.131* (0.059)	0.120* (0.059)	0.128* (0.059)
Board size	0.042 ⁺ (0.025)	0.046 ⁺ (0.025)	0.044 ⁺ (0.026)	0.044 ⁺ (0.026)	0.043 ⁺ (0.026)
Adoption prevalence in industry	-0.043** (0.014)	-0.045** (0.015)	-0.046** (0.015)	-0.044** (0.015)	-0.045** (0.015)
CEO turnover	0.392* (0.163)	0.097 (0.181)	0.093 (0.181)	0.071 (0.183)	0.072 (0.183)
2003 year interval	1.345*** (0.202)	1.368*** (0.207)	1.377*** (0.207)	1.369*** (0.207)	1.377*** (0.207)
2004 year interval	1.656*** (0.237)	1.669*** (0.249)	1.664*** (0.250)	1.652*** (0.249)	1.654*** (0.250)
Return on assets		0.011 (0.029)	0.012 (0.029)	0.013 (0.029)	0.013 (0.030)
Total shareholder returns		-0.001** (0.001)	-0.002** (0.001)	-0.001** (0.001)	-0.002** (0.001)
CEO duality		0.235 (0.141)	0.616** (0.231)	0.233 (0.141)	0.532* (0.237)
CEO tenure		-0.037** (0.012)	-0.037** (0.012)	-0.009 (0.017)	-0.015 (0.018)
CEO ownership		-0.070** (0.023)	-0.071** (0.023)	-0.073** (0.023)	-0.073** (0.024)
External non-institutional blockholder ownership		-0.037** (0.012)	-0.035** (0.012)	-0.037** (0.012)	-0.036** (0.012)
Institutional blockholder ownership		0.009 ⁺ (0.005)	0.023** (0.008)	0.020** (0.007)	0.029** (0.009)
Institutional non-blockholder ownership		0.001 (0.005)	0.001 (0.005)	0.001 (0.005)	0.001 (0.005)
Long-term oriented institutional ownership	0.246 (0.569)	0.450 (0.647)	0.568 (0.651)	0.603 (0.654)	0.650 (0.655)
CEO duality x Institutional blockholder ownership			-0.022* (0.010)		-0.017 (0.011)
CEO tenure x Institutional blockholder ownership				-0.002* (0.001)	-0.001 (0.001)
Constant	-3.211 ⁺ (1.841)	-1.365 (1.937)	-1.916 (1.954)	-2.011 (1.957)	-2.297 (1.965)
Log-likelihood	-711.88	-678.62	-676.36	-676.29	-675.02
Chi-square	190.87	257.40	261.91	262.05	264.60
D.f.	69	77	78	78	79
N	1793	1793	1793	1793	1793

⁺ p ≤ 0.1; * p ≤ .05; ** p ≤ 0.01 *** p ≤ .001. Standard errors are in parentheses.

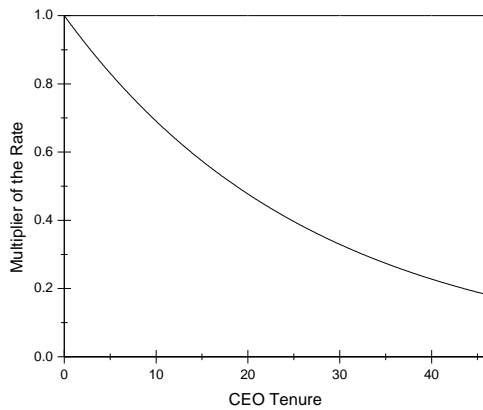


Figure 2. Multiplier Effect of CEO Tenure Ownership on the Rate of the Adoption of Supermajority-Independent Boards

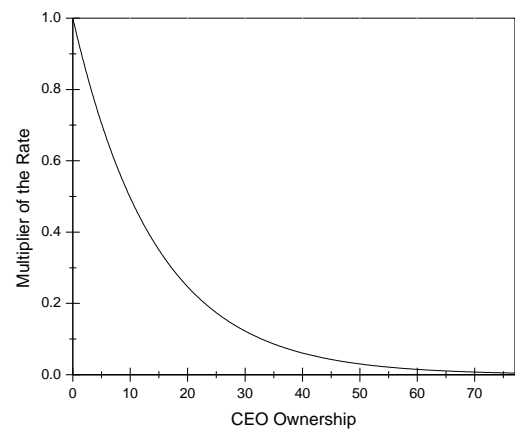


Figure 3. Multiplier Effect of CEO on the Rate of the Adoption of Supermajority-Independent Boards

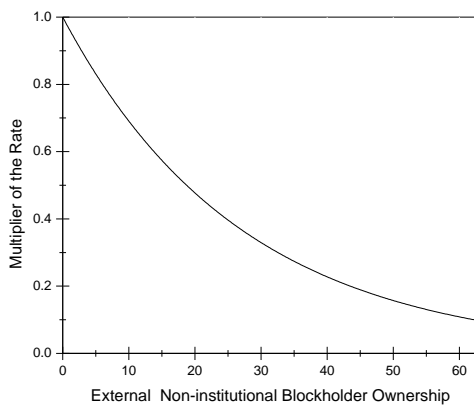


Figure 4. Multiplier Effect of External Non-institutional Shareholder Blockholder Ownership on the Rate of the Adoption of Supermajority-Independent Boards

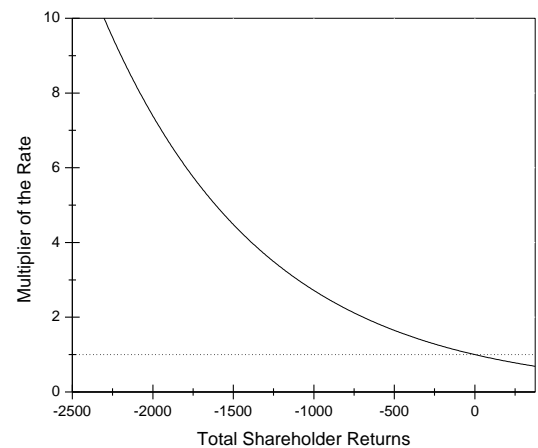


Figure 5. Multiplier Effect of Total Returns on the Rate of the Adoption of Supermajority-Independent Boards*

* Note: The dotted line ($y = 1$) in the graph shows that the effect switched directions when the graph crossed the line: “No effect” is equivalent to a multiplier of 1 (no change in the value of the expression as a result of the variable). So in the case where the multiplier graph crosses the “multiplier = 1” line, the variable goes from increasing the rate to decreasing it.

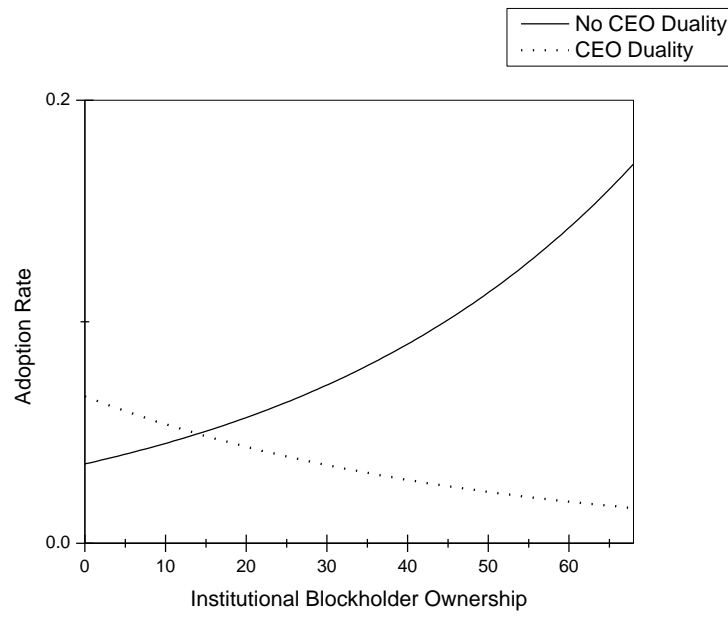


Figure 6. Interaction Effect between CEO Duality and Institutional Blockholder Ownership on the Adoption of Supermajority-Independent Boards

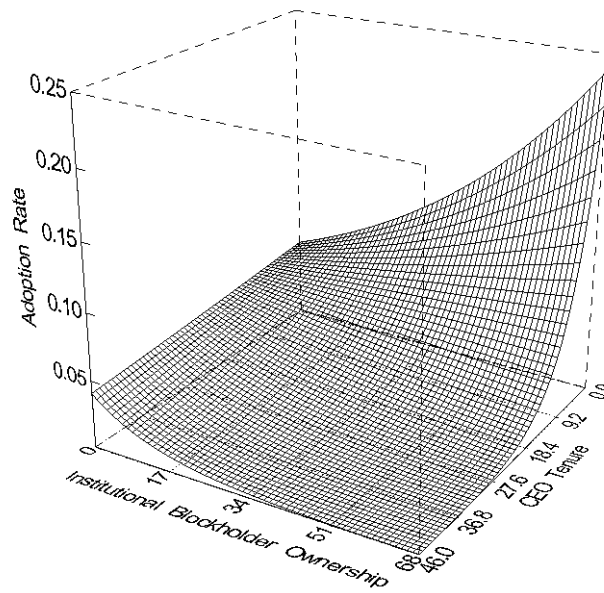


Figure 7. Interaction Effect between CEO Tenure and Institutional Blockholder Ownership on the Adoption of Supermajority-Independent Boards