

CEO Tenure and Board-of-Director Monitoring

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Abstract

We examine the relation between CEO tenure and board-of director monitoring. When the CEO has more tenure, the board meets less frequently. Boards monitor new CEOs from outside the firm more than new CEOs promoted from within. CEOs that leave for positions in new firms are subject to greater scrutiny in previous years than are CEOs matched by tenure, industry, firm size, and performance. Boards are less likely to fire CEOs with longer tenures and base their retention decision on a longer performance history for long-tenured CEOs. Markets react positively to forced CEO turnover when the CEO is more tenured, and negatively when the CEO is less tenured. Boards meet more frequently when firms perform poorly, but neither long-tenured nor short-tenured managers improve performance following abnormally high meeting frequency. Improvements in operating performance precede abnormally low meeting frequency. Following abnormally low meeting frequency, long-tenured CEOs continue to improve performance while short-tenured CEOs do not. Our results suggest that learning and negotiation influence the equilibrium level of monitoring by boards of directors.

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ABSTRACT

We examine the relation between CEO tenure and board-of director monitoring. When the CEO has more tenure, the board meets less frequently. Boards monitor new CEOs from outside the firm more than new CEOs promoted from within. CEOs that leave for positions in new firms are subject to greater scrutiny in previous years than are CEOs matched by tenure, industry, firm size, and performance. Boards are less likely to fire CEOs with longer tenures and base their retention decision on a longer performance history for long-tenured CEOs. Markets react positively to forced CEO turnover when the CEO is more tenured, and negatively when the CEO is less tenured. Boards meet more frequently when firms perform poorly, but neither long-tenured nor short-tenured managers improve performance following abnormally high meeting frequency. Improvements in operating performance precede abnormally low meeting frequency. Following abnormally low meeting frequency, long-tenured CEOs continue to improve performance while short-tenured CEOs do not. Our results suggest that learning and negotiation influence the equilibrium level of monitoring by boards of directors.

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Recent media focus on corporate governance failures and scandals reveals two apparent regularities. First, a prevailing public perception has emerged that boards of directors are too passive in monitoring CEOs.¹ Second, this passive behavior often leads to a breakdown in corporate governance in firms where the CEO has a long and successful tenure at the helm.² Taken together, these observations raise an interesting empirical question. Do directors monitor less as CEOs gain tenure in the firm? Hermalin and Weisbach (1998) and Hermalin (2005) suggest that the equilibrium level of monitoring will decline as the CEO's tenure increases since the board learns about the CEO's ability and the CEO gains bargaining power and negotiates for autonomy. We examine the relation between board monitoring activities and CEO tenure and find a strong negative relation between monitoring and tenure.

Boards of directors have a long and persistent history as a governance mechanism, which suggests that the obligations and structure of boards have evolved as equilibrium solutions to agency problems in the publicly held firm (Hermalin and Weisbach, 2003). Recognizing boards of directors as an equilibrium outcome raises questions about board value, contribution and effectiveness. Extrapolating from Mulherin (2005), we frame our general question as two more narrowly defined questions. First, does board monitoring vary systematically with firm and industry characteristics? Second, does board monitoring induce a change in firm performance?

Empirical evidence shows that the composition and size of the board varies systematically across firm characteristics and industries. Thus, it appears that boards matter. However, the evidence is scant about how the board's monitoring *activities* vary across firm and

¹ Insert citation to news articles

² Insert examples – Ebbers, Lay, Eisner, etc.

industry characteristics. We intend to expand our understanding of the forces that shape board oversight by examining primarily the relations between board monitoring activities and CEO tenure. We also present evidence on systematic variation between monitoring activities across industries and other firm characteristics. Although the literature contains empirical evidence on cross-sectional relations between performance metrics and governance characteristics, their endogenous relations make it difficult to conclude causality. To shed light on this issue, we estimate an equilibrium level of monitoring for each firm and investigate whether significant deviations from this estimated equilibrium level of activity influence operating performance.

Our study is motivated by the theory of Hermalin and Weisbach (1998), who argue that negotiations between CEOs and boards of directors shape the composition and activities of the boards. In their model, the board observes the firm's performance and infers information about the ability of the CEO. Based on this inference, the board will decide to retain the CEO, investigate the CEO to obtain additional information about her ability, or replace the CEO. Assuming that the board retains the CEO, the board and the CEO will implicitly or explicitly negotiate new levels of compensation, board scrutiny, perks, board composition etc. Talented CEOs are valuable to the board, so CEOs who perform and are retained will increase their bargaining power with the board. As an outcome of the bargaining process, both the level of board monitoring and independence declines. This model directly implies a negative relation between board-of-director monitoring and CEO tenure.

A second theoretical paradigm models the optimal composition of the board given industry and firm characteristics. These models (Raheja, 2005; Adams and Ferreira, 2007; and Harris and Raviv, 2006) focus on the information flow from insiders to outsiders and suggest that the composition of the board should optimally differ across industries and firms. In particular,

Raheja predicts that firms in industries that are difficult to monitor, for instance the high tech industry, should have a higher proportion of insiders on the board. In equilibrium, the insiders can provide more information to outside directors, which reduces the costs of monitoring. The bargaining hypothesis and the optimal board composition paradigm both predict a negative relation between board monitoring and the independence of the board. The optimal composition theory, however also predicts a differential response across industries with different degrees of information asymmetry. Both theories identify economic forces that potentially shape board composition and monitoring in equilibrium and are not mutually exclusive.

We divide the board oversight process and its relation with CEO tenure into three phases: (i) monitoring activity by the board (ii) the decision outcomes that evolve as a result of the information gained from these monitoring activities (e.g., the decision to retain the CEO) and (iii) changes in firm performance following changes in the equilibrium level of monitoring. We follow Vafeas (1999) and measure board monitoring by the frequency of board meetings. In addition to the relation between monitoring and CEO tenure implied by Hermalin and Weisbach (1998), many empirical studies use CEO tenure as a proxy for entrenchment or managerial power.³ The results from these studies support the premise that CEOs become entrenched and gain power in the firm as their tenure increases.

Given our definition of the board oversight process, we seek to answer three basic research questions. First, does the board of directors meet less frequently as CEO tenure increases? Boards might meet less frequently as a CEO gains tenure because of CEO bargaining power (Hermalin and Weisbach, 1998) or because the board has obtained positive information about the CEO's ability (Hermalin and Weisbach, 1998; Hermalin, 2005). Second, how does the

³ See Weisbach (1988), Ryan and Wiggins (2004).....

monitoring activity of the board affect their decision to retain a CEO and what impact, if any, does tenure have on these decisions? We expect tenure to have an influence if the CEO achieves tenure because she has more ability or if the CEO exerts power over the board. Third, does firm performance improve following changes in the equilibrium level of monitoring, and does the response differ with respect to CEO tenure? The answer to these questions provides insight into whether boards monitor to gather information for retention decisions, or whether monitoring activities induce performance changes.

Examining 1,324 firms and 8,109 firm-years from 1995 to 2002, we find that the number of board meetings per year declines with CEO tenure. This result is robust to controls for firm performance, industry characteristics, governance characteristics, and endogeneity. Board meeting frequency is negatively related to firm performance. We find that boards meet less frequently in homogeneous industries, which suggests that boards monitor less when they have better estimates of the CEO's ability. The negative relation between performance and monitoring is also stronger in homogeneous industries. Meeting frequency declines with the size of the board and the percentage of inside directors on the board. We also find that meeting frequency is positively related to equity-based compensation for directors, having a CEO who is a member of the founding family, activist block ownership, strategic activities by the firm, and the number of business segments in the firm.

When we test for variations across industry segments we find a stronger negative relation between the number of board meetings and CEO tenure in the high tech industry. This result suggests that learning about the CEO's ability is more valuable when information asymmetry is greater. Also in the high tech industry, we find a stronger negative relation between board meeting frequency and the percentage of insiders on the board. This result supports Raheja

(2005), who argues that the relation between monitoring and board composition should optimally vary across industries. Together, these results suggest that both bargaining between the CEO and the board and the optimal design of the board with respect to the industry environment influence the equilibrium level of monitoring by the board. Our study complements Boone, Field, Karpoff, and Raheja (2007) who find that both bargaining and the firm environment influence the composition of the board.

Our evidence suggests two factors that affect the frequency of board monitoring: (i) the need for information about the CEO's ability and (ii) whether the CEO negotiates with the board to monitor less. Boards have less information about a CEO who comes from the outside than one whom they promote from within. Thus, they have greater incentives to monitor outside CEOs more frequently. Supporting this notion, meeting frequency is higher for first-year CEOs who come from outside the firm than for first-year CEOs who are promoted within the firm. Presumably, CEOs use the threat of leaving the firm to negotiate better terms (see, e.g., Rajan and Zingales, 1999). If so, one would expect some CEOs whose negotiations are less successful to voluntarily leave the firm. Relative to a matched CEO based on tenure, industry, firm size, and industry-adjusted performance, we find that CEOs who voluntarily leave for a position in another firm faced greater scrutiny in each of the previous two years than did the matching CEO who chose to remain with the firm. This result supports the premise that CEOs negotiate for less board oversight and use the threat of leaving the firm as a bargaining chip in their negotiations.

To better understand the how changes in monitoring relate to changes in performance, we examine the firm's operating performance for one year before and three years after shocks to the equilibrium level of monitoring, which we categorize as forced CEO turnover, abnormally high meeting frequency, and abnormally low meeting frequency. For these tests, our sample period

ranges from 1994 to 2005. Supporting the premise that boards monitor more intensely following poor performance, we find that performance declines prior to both abnormally high meetings and forced turnover. However, we find no evidence that these monitoring activities change performance; subsequent performance is flat or continues to decline. In contrast, performance improves in the year prior to abnormally low meetings for both long- and short-tenured CEOs. Afterwards, performance continues to improve for CEOs with long tenures, but is flat for the newer CEOs. These findings support the idea that boards monitor to obtain information for retention and termination decisions but fail to support a causal relation between board monitoring and firm performance. Given that monitoring is costly, the results also suggest that lower levels of monitoring in good times, particularly for CEOs with longer tenure, represent a constrained optimum. Thus, mandates for more active boards may be questionable.

In sum, our analysis suggests that directors learn about the abilities of CEOs over time by observing their performance and CEOs negotiate for more autonomy as their tenure increases. Monitoring declines as CEO tenure increases and as the board has a greater proportion of insiders. Both relations vary in strength by industry. Tenured CEOs are less likely to be fired, but CEO tenure does not affect the sensitivity of forced turnover to firm performance. Disruptions to the equilibrium level of monitoring do not cause operating improvements, but CEOs with long tenures continue to perform well even when subject to abnormally low levels of scrutiny. Taken together, these results support the premise that the level of board monitoring evolves over time as a constrained optimal equilibrium that is influenced by bargaining between the CEO and the board as well as the environment in which the firm operates.

The article is organized as follows. In Section I, we develop testable hypotheses and review related literature. Section II describes the sample selection process and data. Section III

presents our analysis of board of director meetings and CEO tenure, and Section IV presents our test of the relation between forced CEO turnover and tenure. Section IV contains our examination of firm operating performance, and Section V concludes.

I. Conceptual Development and Related Literature

Fama and Jensen (1983) argue that the board of directors should monitor managers on behalf of shareholders to mitigate the agency problems that arise from the separation of ownership and control in the publicly held firm. Monitoring is costly, so in equilibrium boards will monitor until the benefits equal the costs (Jensen and Meckling, 1976). The tradeoff between the costs and benefits of monitoring allows us to develop testable hypotheses. To develop these hypotheses, we rely primarily on the monitoring theory of Hermalin and Weisbach (1998), which is based on bargaining between the CEO and the board. We also test implications for monitoring that arise from the optimal board structure literature, particularly Raheja (2005), and control for a number of influences identified by empirical studies.

A. Board of Director Monitoring

Hermalin and Weisbach (1998) derive an equilibrium model of monitoring within a bargaining framework in which directors receive positive utility from firm performance and disutility from monitoring. Based on their prior estimates of a CEO's ability and observable earnings, directors will decide whether to monitor the CEO to obtain additional information. The directors retain the CEO if they believe he or she will increase the value of the firm. The decision to retain enhances the CEO's position and allows him to bargain for more salary, greater autonomy, and influence over new appointments to the board. Over time, monitoring will decrease as boards learn more about the CEO's ability, the board's independence declines, and

the CEO gains power over the board. This process leads to our main hypothesis: board of director monitoring will decrease as the tenure of the CEO increases.

We also rely on Hermalin and Weisbach's model to develop the following hypotheses. Proposition 1(i) states that monitoring will decline with the board's prior estimate of the CEO's ability. The prior estimate of ability should relate positively to past performance, hence monitoring will relate negatively to prior earnings. Proposition I (ii) predicts that monitoring will decrease with the precision of the board's prior estimate of CEO ability. The board will have a more precise estimate of the CEO's ability when the industry is homogeneous and required skill sets more easily identified. Thus, we hypothesize that in homogeneous industries, monitoring will be lower and the proposed negative relation between monitoring and earnings will be stronger. Proposition 1 (iii) states that monitoring will decline with the collective lack of independence of the board. For this reason, we expect a negative relation between board monitoring and the percentage of insiders on the board.

Alternatively, a negative relation between monitoring and the percentage of insiders on the board can result from the optimal design of the board in response to its economic environment. Raheja (2005) argues that insiders on the board can provide information to outside directors to improve decision making. In equilibrium, there is a tradeoff between the loss of board independence and the ability to efficiently facilitate the transfer of information to outside directors. Thus, she argues that firms in industries that are difficult to monitor, for instance the high tech industry, will optimally have more insiders on the board. Raheja's theory suggests that the relation between monitoring and the percentage of insiders on the board should be negative in industries that are difficult to monitor. Thus, based on the optimal design of the board, we expect the relation between board monitoring and insiders to differ across industries. We note

that the optimal board design and bargaining models are not mutually exclusive. Both theories conceivably capture different aspects of the economic forces that influence board oversight.

The board structure literature also provides implications for relation between monitoring and board size. Lipton and Lorsch (1992) and Jensen (1993) argue that large boards are difficult to coordinate and exacerbate agency problems. Yermack (1996) finds a negative relation between Tobin's Q and board size, and Eisenberg, Sundgren and Wells (1998) find a similar negative relation between earnings and board size. However, endogeneity makes it difficult to infer a causal relation between performance and board size. Although our study cannot unravel the endogenous relation between performance and board size, it does shed some light on the proposition that large boards are more difficult to coordinate. Assuming this proposition, is correct, we expect large boards to meet less frequently.

B. The CEO Retention Decision

A salient feature of effective corporate governance is the capacity to evaluate CEOs and replace those who perform poorly (Morck, Shleifer, and Vishny, 1989). Researchers (e.g., Weisbach, 1988; Borkohovich, Parrino, and Trapani, 1996; Huson, Parrino, and Starks, 2001) find a negative relation between CEO turnover and performance, which they use as a measure of the efficacy of corporate governance. CEO tenure will influence the board's CEO replacement decision if the CEO has (i) accrued tenure due to his superior ability and is valuable to the directors or (ii) gained significant power over the board and can obstruct the oversight process. If CEOs gain tenure because they have performed well in the past, we expect a negative relation between forced CEO turnover and CEO tenure, but no influence of CEO tenure on the sensitivity of turnover to firm performance. If CEOs exert power over the board and keep their job despite

poor performance, we expect a weaker sensitivity between forced turnover and firm performance for more tenured CEOs.

We also test hypotheses about the market reaction to forced turnover announcement derived from Hermalin and Weisbach (1998). Proposition 10 states that the stock price will fall if the CEO is fired on the basis of the board's private information since the announcement reveals bad news about the firm's operations to investors. Proposition 11 states that if the board's independence is not known by investors, the stock price will rise if the CEO is fired on the basis of public information since the announcement signals that the board is relatively more independent. We assume that there is some uncertainty about the degree of independence of the board and offer the following hypotheses. First, we expect that the reaction to forced turnover will be positive when the firm has experienced negative performance over the preceding year and negative if the firm has experienced positive performance. Second, since theory predicts that the board loses independence as the CEO gains tenure, we expect a positive reaction to dismissal of CEOs with greater tenure since the announcement would reveal that the board has retained independence and acts in shareholder interests.

C. Monitoring and Firm Performance

The endogenous nature of corporate governance makes it difficult to propose hypotheses about the cross-sectional relations between monitoring and firm performance (Hermalin and Weisbach, 2003). Moreover, it is not clear that more monitoring is necessarily optimal for all firms (Adams and Ferreira, 2007). To overcome the endogeneity problem we first estimate an equilibrium level of monitoring based on firm and industry characteristics. We then investigate the change in the firm's operating performance to three changes in the equilibrium relationship

between the board of directors and the CEO: (i) forced CEO turnover ((ii) abnormally high levels of monitoring, and (iii) abnormally low levels of monitoring. If the board has the ability to identify superior CEO talent, we expect performance to improve following forced CEO turnover. Alternatively, if there are sufficient constraints on the supply talented CEOs, forced turnover would not necessarily result in improvements. If board monitoring causes performance, we expect performance improvement following abnormally high levels of monitoring, and a decline in performance following low levels of monitoring. Alternatively, if monitoring represents the constrained optimal acquisition of information, we expect either no change in performance or possibly even the continuation of previous trends.

D. Empirical Evidence

Our study provides empirical evidence on the relation between board-of-director monitoring and CEO tenure. Except the CEO turnover research, described in a prior subsection, there is scant empirical research that focuses directly on board activities. A major reason for the lack of empirical research is that most board actions cannot be observed by researchers. The number of board meetings, however, is disclosed in proxy statements. Vafeas (1999) finds that the number of board meetings relate negatively to prior firm performance, which suggests that board meetings represent monitoring activity by the board. He also finds weak evidence that performance improves following abnormal board meeting activity, measured by a deviation from the firm's in-sample time series average. A contemporaneous paper by ...

Consistent with the bargaining hypothesis, Ryan and Wiggins (2004) find that directors of firms that have CEOs with longer tenures receive weaker incentives to monitor. They also find that director incentives relate negatively to the percentage of insiders on the board.

II. Sample Selection and Data

A. *Sample Selection and Data Sources*

To obtain a sample of firms for our analysis, we start with all firms in the *Standard and Poor's ExecuComp* database during the period 1995 to 2002. We stop our sample in 2002 to allow for our analysis of operating performance following abnormal board meeting events and forced CEO turnover. The *ExecuComp* database provides information on firms in the S&P 500, the Midcap 400, and the Smallcap 600. From the *ExecuComp* database we obtain the number of board meetings during the year, the CEO's starting date as CEO, the CEO's age, and information on incentive compensation paid to directors by the firm. We fill in missing data and verify all *ExecuComp* data on the CEO's start date, CEO age, and the number of board meetings by reading proxy statements. When CEO start dates are not disclosed in the proxy statement, we search news wire releases on CEO appointments and retirements to complete the tenure data. To determine the CEO's tenure, we measure the time in whole years from the starting date to the year of the analysis. For consistency and to identify CEO succession years, we truncate any time in office to the last complete year. For instance, a CEO who has been in position for three years and seven months would have tenure of three years, and a CEO who has served for less than twelve months will have tenure of zero.

In addition to the CEO's tenure and age and the financial incentives to monitor faced by the directors, we control for a wide variety of internal governance characteristics including board size, inside directors, board committees, classified boards, whether the CEO is also chair of the board, management ownership, and whether the CEO is a member of the founding family of the

firm. We control for outside monitoring mechanisms by including the percentage of block holdings (5% or more of outstanding shares) by institutional investors. We use industry-adjusted return on assets and industry-adjusted stock returns as measures of firm performance. Monitoring is likely to increase as the complexity of the firm's operations increase. We use the number of business segments reported by the firm and firm size as proxies for operating complexity.

Managerial actions should be easier to evaluate in a homogeneous industry since other managers in the industry provide better benchmarks for comparison, and managerial skills should more easily transfer from one firm to the next. Thus, in homogeneous industries, we expect that directors can assess managers' skills with less monitoring, but that forced turnover would increase the likelihood that the new CEO would be from outside the firm. Parrino (1997) finds a greater likelihood of outside turnover in homogeneous industries. We use the method proposed by Parrino and calculate an industry homogeneity measure as follows. First, we create an equally weighted return index for the 2-digit SIC industry using monthly returns from January, 1995 to December, 2002. We next estimate a regression of the monthly return for each firm in the index against the equally weighted market index and the industry index. Then, we take the partial correlation coefficient for the industry return index and average it across all firms in the industry to obtain the homogeneity proxy. We also follow Parrino and classify turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigned or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60.

From the firms' proxy statements, we also collect information on whether the CEO chairs

the board, the number of directors on the board, the number of insiders on the board, the number of standing committees on the board, whether directors are classified or elected annually, and managerial ownership. We also use the proxy statement to determine if the CEO is a member of the founding family, which we define as the founder, relatives of the founder, or descendants of the founder. We define inside board members as members who are current or former officers of the firm, or family members of current officers of the firm. Information on outside institutional block holders comes from the CDA Spectrum database of SEC 13-f filings. Financial, accounting, and segment data are obtained from the *Standard and Poor's* Compustat database and stock return data from the *Center for Research on Security Prices (CRSP)* database. Strategic activities could also influence board meeting frequency. We construct a proxy for strategic activities that would require board attention by summing the number of securities issues, repurchases, spinoffs, or proposed mergers considered during the year. Information on the number of securities issues, repurchases, spinoffs, or proposed mergers considered during the year comes from the SDC database published by *Thompson Financial*. We exclude financial firms (SIC codes 6000 – 6999) and utilities (SIC codes 4900 - 4999) to avoid complications that arise from the regulatory environment in which these firms operate. Accounting for the excluded industries and missing data, the final sample consists of 1,324 firms and 8,109 firm-years.

B. Method for Estimating Abnormal Meeting Activity

For our examination, we need a baseline measure of normal monitoring activity against which we can classify observed levels as abnormally high or abnormally low. Since we will test for a relation with CEO tenure and control for board characteristics, firm characteristics, and firm performance, we would like for our predicted value to be independent of governance, CEO, and

performance measures. To this end, we model normal meeting activity by estimating a regression with the number of meetings in a given year as the dependent variable and firm size and dummy variables for industry and year as independent variables as indicated in equation 1.

$$\text{Number of Meetings} = \beta_0 + \beta_1 \log(\text{Assets}) + \sum \beta_i D_{\text{Ind}} + \sum \beta_j D_{\text{Year}} + \tilde{\varepsilon} \quad (1)$$

After establishing a normal meeting level as a benchmark, we need to designate some deviation from this benchmark as indicative of abnormal activity. We use two approaches. First, we take the difference between the actual number of meetings and the predicted number of meetings and use this deviation as a continuous variable. Second, we use the distribution of the predicted values to assist in this classification and categorize any firm-year in which the number of board meetings exceeds the predicted value by more than one standard error as an abnormally high meeting year. Conversely, we classify any firm-year in which the meetings are more than one standard error below the predicted number of meetings as abnormally low.⁴

C. Sample Characteristics

We present descriptive statistics for the sample in Table 1. On average, boards meet 6.90 times per year. The median number of meetings is 6 with a range from 1 to 36. Based on our method, we classify 12.84% (1,041 firm-years) of the observations as abnormally high monitoring and 9.13% (740 firm-years) as abnormally low. In untabulated results, we find that the mean (median) number of meetings in abnormally high years is 12.31 (12). For abnormally low meeting years, the mean (median) is 3.91 (4). CEO tenure ranges from 0 to 52 years with a mean (median) of 8.31 (6). The average (median) CEO age is 55.35 (56). The youngest CEO is

⁴ As a robustness check, we also classify abnormally high meetings as in Vafeas (1999). In this method, a firm-year is considered to be abnormally high if it exceeds the time-series in-sample average number of meetings by more than one meeting. The results are similar to those for our proxies of abnormally high meeting frequency.

26 and the oldest is 91.⁵ CEO turnover occurs in 9.52% of the observations (772 firm-years). Of these turnovers, 14.51% are forced, which compares to 16.2% reported by Huson, Parrino, and Starks (2001) for an earlier time period. Approximately 25% of the CEOs are members of the founding family, many of which are founders of firms that went public in the 1990s. Nearly 69% of the CEOs chair the board. In results not reported in a table, we find that this percentage declines monotonically over our sample from 71.3% in 1995 to 66.4% in 2002.

[Insert Table I]

The mean (median) number of directors on the board is 9.1 (9). The largest board consists of 26 directors and the smallest has 3 directors. On average, nearly 28% of directors are insiders with a range from 0 to 100%. The median observation is a board with 25% inside directors. Classified boards with directors elected in staggered terms comprise about 59% of the sample. The mean (median) number of board committees is 3.49 (3) with a maximum of 10 and a minimum of 0. Directors receive equity-based compensation and additional fees for attending meetings in approximately 78% of the firm-years, which compares to about 80% in Ryan and Wiggins (2004). In results not reported in tables, we find that approximately 17% of the firms provide directors equity-based compensation but do not pay meeting fees and 17% pay meeting fees but do not use equity-based compensation for directors.

On average, management owns 4.92% of a firm's shares with the median ownership at 1.11%. The maximum management ownership is 44.3%. Although institutional investors could serve as outside monitors, most institutions choose to sell underperforming stocks rather than monitor (see Parrino, Sias, and Starks, 2003.) Thus, we follow Cremers and Nair (2005) and

⁵ Nathaniel Sills of Standard Motor Products is the oldest CEO and Richard III of the Triumph Group, Inc. is the youngest. Lillian Vernon of Lillian Vernon Corp. has the longest tenure.

aggregate the block holdings of 18 pension funds that have a stated policy of actively monitoring firms.⁶ The mean (median) activist block holding is 0.24% (0%) of outstanding shares. The range of outside blockholdings is from 0 to nearly 21%. On average, firms engage in about 3 strategic activities per year, with a range of 0 to 34. The median firm has assets of \$956 million and 3 business segments. Assets and business segments average \$3.8 billion and 2.84 segments, respectively. The smallest firm has assets of \$56.5 million and the largest has assets equal to \$55.5 billion. Business segments range from 1 to 10. Industry-adjusted return on assets in the previous year averages 3.40% and ranges from -38.28% to 24.90. We winsorize all data at the 1% and 99% levels, respectively, to mitigate the influence of extreme observations.

III. Board of Director Meetings and CEO Tenure

The first step in our analysis is to examine the relation between board meeting frequency and CEO tenure. To better understand the role of directors and board meetings in monitoring CEOs, it is helpful to consider the process through which meetings are planned and organized. In the next subsection, we present a discussion of the responsibilities of the board and the chairman in organizing and planning meetings. We present our empirical analysis of meeting frequency and tenure in subsequent subsections.

A. How Board Meetings are Planned and Organized

Although there is some variation across firms, we can gain insight into both the monitoring role of the board as well as the ability of the CEO to obstruct it by considering a

⁶ The list of activist pension funds consists of California Public Employees Retirement System, California State Teachers Retirement, Colorado Public Employees Retirement Association, Florida State Board of Administration, Illinois State Universities Retirement System, Kentucky Teachers Retirement System, Maryland State Retirement and Pension System, Michigan State Treasury, Montana Board of Investment, New Mexico, Educational Retirement Board, New York State Common Retirement Fund, New York State Teachers Retirement System, Ohio Public Employees Retirement System, Ohio School Employees Retirement System, Ohio State Teachers Retirement System, Texas Teachers Retirement System, Virginia Retirement System, and State of Wisconsin Investment Board.

stylized summary of best practices among boards of directors. According to *2005 Report of the Blue Ribbon Commission on Director Professionalism* published by the National Association of Corporate Directors, the chair of the board takes a leadership role in meeting planning process. The chair is responsible for setting the schedule of meetings, for planning the agendas of those meetings and for all intra-board communications outside of these meetings. Agenda items and other topics of importance may be coordinated through the lead independent director and through communication with the committee chairs. Typically, any board member can request that a special meeting be scheduled. Board members can also request that a topic be included on the agenda or have the opportunity to raise the issue during the meeting.

Although there is some discretion in choosing the topics, the agenda planning often follows a more structured approach as shown from the description of topics found in the Corporate Governance Guidelines for Proctor & Gamble.⁷

“The Board agenda will include regular in-depth reviews of the key issues affecting the Company overall, and various Company businesses and functions. Business unit and functional presentations will address key issues facing the business unit/function, and decisions and strategies relating to those issues. Appropriate time will be allotted for Board member questions and input. At least once per year, the Board will meet to review the performance and succession plan for the Company's Chief Executive, and executive continuity plans for other principal officers (the meetings may be separate). Succession planning should include policies and principles for Chief Executive selection and performance review, as well as policies regarding succession in the event of an emergency or the retirement of the Chief Executive. The Board's evaluation of the Chief Executive's performance will be shared with the Chief Executive. “

The chair presides over the meetings of the board. Additionally, the chair receives and consolidates feedback and reports from committees and disseminates this information to the rest of the board.

⁷ http://www.pg.com/company/our_commitment/corp_gov/corp_gov_guidelines.jhtml

These stylized facts reveal institutional features important to the motivation and design of our study. As is underscored by the guidelines for Proctor and Gamble, the board of directors has the responsibility to monitor the CEO, review performance, and make hire or fire decisions. Furthermore, board meetings provide the vehicle via which these actions occur. Independent directors can generally request a special board meeting, which supports the use of meeting frequency as a measure of monitoring. Despite the intent of best practices, the CEO has the ability to obstruct the monitoring function of the board if he can weaken the independence of the directors. Although serving as both CEO and chair provides a direct means to influence the board agenda, self-dealing efforts would appear to be successful only to the extent that the directors are not truly independent of the CEO's influence. We control for CEO/chair duality in our multivariate tests and do not find a significant relation between monitoring activities and CEO/chair duality. However, we do find a significant relation with CEO tenure.

B. Univariate Analysis of Board Meeting Frequency and CEO Tenure

As the first step in our analysis, we divide the sample into quintiles based on CEO tenure and calculate the average number of board meetings per year for each quintile. We present the results in Figure 1. The average number of board meetings per year declines monotonically from the smallest quintile to the largest. On average, boards with CEOs who have tenure of one year or less hold 1.35 more meetings than do boards with CEOs who have 14 years of tenure or more, a decline of 17.6%. The largest decrease in monitoring occurs from the first quintile to the second (a decrease of 0.62 meetings per year), with further declines of 0.24, 0.22, and 0.27 meetings per year, respectively, across the remaining quintiles.

[Insert Figure 1]

We next divide our sample into firms with CEOs in the first and second quintiles (tenure of four years or less, henceforth untenured) and firms with CEOs with tenure of more than four years (henceforth, tenured). Assuming that new CEOs frequently have a probationary year (see Vancil, 1987) this division allows CEOs to clear probation and go through three director elections if the board is classified. We believe that dividing the sample at the second quintile reasonably separates CEOs who have had the opportunity to amass power from those who have not and also provide a sufficient time for directors to have learned about CEO ability. Based on this segregation, we compare the number of meetings, the proportion of abnormally high meeting years, and the proportion of abnormally low meeting years. We present the results of this comparison in Table 2.

[Insert Table 2]

Panel 1 presents our analysis for the complete sample. The mean (median) number of meetings for the tenured group is 6.57 (6) compared to 7.34 (7) for the untenured group. These values are significantly different with p -values less than 0.01. Similarly, we find that the firms with tenured CEOs have a lower proportion of abnormally high meeting years (11.19% compared to 15.01%) and a higher proportion of abnormally low meeting years (11.25% compared to 6.32%), both significantly different with p -values less than 0.01. It stands to reason that boards will meet more frequently during turnover years, whether forced or normal succession, so we further segregate the sample into non-turnover years (Panel B) and turnover years (Panel C). As expected, boards meet more frequently when there is turnover, but the same pattern observed in Panel A persists – boards meet less frequently when the CEO has tenure. However, this result does not extend to forced turnover, which we present in Panel D. On

average, the number of meetings is essentially identical (9.14 compared to 9.13). The mean, median, and proportions do not significantly differ across the two groups.

C. Multivariate Analysis of Board Meeting Frequency

In Table 3, we present our multivariate analysis of board meetings and CEO tenure. We present three models. The first model uses a Poisson model with the number of board meetings as the dependent variable. The second model is an ordinary least squares regression with the natural logarithm of the deviation of actual meetings from projected meetings (scaled to eliminate negative numbers) as the dependent variable. The third and fourth models are probit estimations with indicator variables for abnormally high meeting years and abnormally low meeting years, respectively, as the dependent variables. Our primary independent variable of interest is CEO tenure. We also include the industry-adjusted return on assets in the prior year, the percentage of inside directors on the board, the size of the board, the number of board committees, classified boards (0/1), CEO/chair (0/1), whether directors receive equity-based compensation (0/1), whether directors receive an additional fee for attending meetings (0/1), management ownership and the square of management ownership, the percentage of activist block ownership, the number of business segments in the firm, firm size, the number of strategic activities undertaken by the firm, industry homogeneity, and year dummy variables. We base p -values on robust standard errors with firm clustering.

[Insert Table 3]

Consistent with the premise that directors monitor less as the CEO gains tenure, we find that CEO tenure negatively influences the number of meetings, the deviation from projected meetings, and the likelihood of abnormally high meeting years. All relations are significant at p -

values less than 0.01. Moreover, we find that the likelihood of abnormally low meeting years positively relate to CEO tenure (significant at the 0.01 level). We also find that directors meet more frequently and are more likely to have an abnormally high meeting year following poor performance (p -values less than 0.01) and are more likely to have an abnormally low number of meetings following good performance (p -value equals 0.04). We observe a negative relation between meeting frequency and management ownership, and a positive relation between meeting frequency and activist block ownership. Both relations are significant at the 0.1 level.

Boards monitor less when the percentage of insider directors is larger (p -values are less than 0.01). Board size negatively influences the number of meetings, the probability of abnormally high meetings, and the likelihood of abnormally low meetings (all significant at the 0.01 level). These results support the argument that large boards are difficult to coordinate and therefore exacerbate agency problems (Lipton and Lorsch, 1992, Jensen, 1993). Large boards appear to meet less frequently and also have less flexibility to significantly alter the meeting schedule to accommodate extremes in the number of meetings. We also find that directors monitor more frequently, are more likely to have abnormally high meetings, and are less likely to have abnormally low meetings when they receive equity-based compensation (p -values less than or equal to 0.01). Presumably, boards with more committees engage in more active monitoring (Vafeas, 1999). Supporting this premise, we find a positive relation between the number of board meetings and the number of committees (p -value equals 0.02 for the observed number and 0.06 for the deviation) and a negative relation between the probability of abnormally low meetings and the number of committees (p -value equals 0.07). Consistent with the complexity argument, we find that directors of larger firms and firms with more business segments meet more frequently. However, we note that larger firms meet less than the projected number of

meetings and are more likely to have years with an abnormally low number of meetings. Directors meet more often when the firm engages in more strategic activities and less often when the industry is more homogeneous.

The coefficient on the dummy variable for CEO membership in the founding family is positive in all specifications and significant in the meeting frequency model (p -value equals 0.06) and the abnormally high meeting frequency model (p -value equals 0.00). However, when the CEO is a member of the founding family, the relationship between the board of directors and the CEO takes on a different nature. We conjecture that the relation between monitoring frequency and CEO tenure will be weaker when the CEO is a member of the founding family. First, we presume that the board has more information a priori about CEOs who are family members. Second, it seems likely that the presence of other family members on the board or additional scrutiny by outside family members would lessen the likelihood that the CEO gains significant power over the board. For these reasons, we analyze separately the relation between tenure and meeting frequency for non-family CEOs and CEOs who are members of the founding family. Table 4 presents the results of this analysis.

[Insert Table 4]

For ease of exposition, we present and discuss only results for the number of meetings and the deviation from projection. The results for the probit analysis of abnormally high and low meeting frequency are qualitatively similar to those for the deviation from projection. Although the CEO tenure negatively influences meeting frequency for both non-family and family CEOs, the coefficients are larger and more significant when the CEO is not a member of the founding family. We use an interaction term between CEO tenure and the founding family dummy

variable to test for the significance of these differences. Consistent with our premise, we find in untabulated results that the interaction term is positive and significant (p -values less than 0.05) for both meeting frequency and the deviation from predicted meetings. To further explore the differences between family firms and non-family firms, we compare number of meetings in family firms to those non-family firms. In results not reported in a table, we find that on average the board in family firms meets 6.4 times per year, compared to 7.1 times in non-family firms (p -value equals 0.00).

Paying directors meeting fees increases meeting frequency for non-family CEOs (p -value is less than 0.01), but not for family CEOs. We also find that the positive relations between meeting frequency and board committees, activists, and strategic activities are confined to the sample of non-family CEOs. In contrast, the positive relation between meeting frequency and the number of business segments is only significant (p -values are less than 0.01) when the CEO is a member of the founding family.

Taken together, the results of our analysis of meeting frequency are consistent with an equilibrium level of monitoring that is based on learning about and bargaining with the CEO. Monitoring negatively relates to CEO tenure and also with the percentage of insiders on the board and board size. In family controlled firms, the board meets less frequently, but the influence of CEO tenure on meeting frequency is much weaker. These results are consistent with both the bargaining power hypothesis and the learning hypothesis. We note that these two explanations need not be mutually exclusive. In the next subsection, we seek to gain additional insight into these two propositions.

D. Analysis of Meeting Frequency for First-year CEOs and CEOs Who Leave the Firm

We presume that the board of directors would have less information about a new CEO from outside the firm than they would have about a new CEO promoted from within. Thus, if a primary role of monitoring is to gain information about the CEO's ability, we expect that the board will meet more frequently when a new CEO is from outside the firm than when he is an insider. To examine this premise, we identify all first-year CEOs and determine whether they were promoted from within or hired from outside the firm. Panel A of Table 5 presents a comparison of meeting frequency for these two groups. Consistent with the learning hypothesis, boards meet more often in a CEO's first year when the new CEO comes from outside the firm. The mean (median) number of meetings is 8.96 (8) when the new CEO is an outsider compared to 7.44 (7) when he is an insider (significant at p -values less than 0.01). Deviations from projected meeting frequency tell a similar story. The mean (median) deviation is 2.01 (1.14) for outside CEOs compared to 0.72 (-0.03) for insiders.

[Insert Table 5]

A CEO's major bargaining chip in negotiating with the board is the threat that he will leave for a position in another firm. To examine this premise, we identify all CEOs who leave for a position in another firm, are not classified as forced turnover by Parrino's (1997) measure, and have been at the current firm for more than one year. To avoid early or normal retirements, we eliminate any CEO if a press release indicates he retires or if he is above the age of 60. We posit that CEOs will be more likely to leave when they cannot negotiate greater autonomy from the board. To test this premise, we need a sample of CEOs who remain with their firms, but that otherwise are very similar to the CEOs who leave. Thus, we match each CEO who leaves to

another CEO with the same tenure who remains at his firm. We further match by industry adjusted performance (+/- 10% ROA), firm size (+/- 30% when possible and then +/- 50%), and industry (4 digit SIC code when possible, then 3 digit etc.). If the proposition that CEOs negotiate for less oversight is correct, we expect the CEO who leaves to have faced a higher level of scrutiny in the past than those who stay.

We present our comparison of meeting frequency for exiting and remaining CEOs in Panel B of Table 5. We present data for each of the two years preceding the turnover.⁸ In the year before the CEO leaves the firm, the mean (median) number of board meetings is 7.86 (7) compared to 7.13 (6) for the matched CEO. These differences are statistically significant at *p*-values of 0.03 (0.06) in matched pairs tests. The deviation from the predicted level of monitoring is also larger for the leaving CEO with a mean (median) of 0.89 (0.56) compared to 0.24 (-0.41). The *p*-values for these differences are 0.05 and 0.12, respectively. The CEO who leaves the firm also faces greater scrutiny two years prior to his departure. On average, the board meets 7.13 times for the leaving CEO compared to 6.48 for the CEO who remains (*p*-value equals 0.11). The median firm meets 7 times when the CEO subsequently leaves compared to 6 times for the CEO who stays (*p*-value equals 0.09). The mean (median) deviation from the projected number of meetings is 0.29 (-0.23) for the CEO who leaves compared to -0.40 (-0.79) for the CEO who stays. The *p*-value for the difference is 0.08 for the mean and 0.04 for the median.

⁸ For purposes of our test, we do not present meeting frequency in the year of the turnover since boards would mostly likely meet more frequently when faced with an unanticipated turnover. For completeness, however, we examine the number of meetings in the turnover year and find that boards meet much more frequently when the CEO leaves. For instance, the average number of meetings in the year the CEO leaves the company is 8.52 compared to 7.1 for firms when the CEO stays, significantly different at the 0.01 level.

The results in Table 5 support both the learning hypothesis and the bargaining hypothesis. Boards meet more frequently when a new CEO is an outsider and they have less information about his ability. CEOs are more likely to leave for another position when they cannot negotiate greater autonomy from board oversight and are subjected to greater scrutiny.

IV. Forced Turnover and CEO Tenure

After monitoring to gain information about a CEO's ability, boards choose whether to retain or replace the CEO. To gain insight into this decision, we next analyze forced CEO turnover and its relation to CEO tenure.

A. Market Reaction to Announcements of Forced CEO Turnover

From the original ExecuComp sample, we are able to identify the announcement data of 141 forced CEO turnovers. We use (i) the market model and (ii) a four-factor Fama-French model with a momentum factor to estimate the abnormal market returns from day t_{-1} to t_{+1} and t_{-2} to t_{+1} . We report t-statistics for the market model CARs based on Patell (1976) and on the time series crude dependence adjustment method (see Brown and Warner, 1980) for the four-factor model. We also report a nonparametric generalized sign statistic to test whether percentage of positive returns differs significantly from the estimation period. The results of our event study are presented in Table 6.

[Insert Table 6]

For the entire sample of forced turnover announcements, we find evidence of a weakly significant positive reaction using the market model and a positive but insignificant reaction using the four-factor model. Hermalin and Weisbach (1998) argue that the information content

of CEO removal will differ depending on whether the turnover is based on public or private information. If the turnover is based on public information, we expect a positive reaction to the turnover announcement since the board reveals that it is acting on behalf of shareholders. If the turnover is based on private information, we expect a negative reaction to the announcement since the turnover reveals negative information about the firm's operations that had previously been hidden from outsiders. We cannot know all public information that becomes available to shareholders in a given year, but if markets are at least semi-strong form efficient it will be impacted in the stock price. Based on this argument, we segregate the sample into those firms for which the prior one-year industry-adjusted stock return is negative (turnover based on public information) and those for which the prior industry-adjusted returns are positive (turnover based on private information). Consistent with the Hermalin and Weisbach proposition, we find a negative reaction to the turnover announcement when the prior period returns are positive. The CARs are significant (at the 0.05 level or better) in three of the four estimations. When the prior period returns are negative, we find significantly positive announcement CARs for all estimations (significant at the 0.01 level). The percentage of positive announcement returns also differs significantly from the positive returns in the estimation period at the 0.10 level or better in all estimations.

In a similar fashion, we argue that outsiders will have more information about the abilities of CEOs with longer tenures than they would have about newer CEOs. Additionally, theory and evidence suggests that the tenured CEOs have greater influence over the board. Hence, the forced turnover of tenured CEOs should reveal the good news that the board is acting on behalf of shareholders, but the forced turnover of untenured CEOs should reveal bad news about his or her abilities and the fortunes of the firm. Thus, we divide our sample into tenured

CEOs (tenure greater than 4 years) and untenured CEOs (tenure of 4 years or less) and estimate the event studies for these samples. We find a strong positive reaction to the forced turnover of tenured CEOs, significant at the 0.01 level or better in all estimations. These results provide some insight into the costs of excessive managerial power. Our CARs range from 4.26% to 4.40% over the event windows. Assuming a market capitalization equal to \$5.45 billion, the average for the sample of tenured CEO turnovers, these events represent an average increase of approximately \$239 million in shareholder value. As expected, the reaction to the forced turnover of untenured CEOs is negative, but it is only significant for the market model CARs.

B. Univariate Analysis of Forced CEO Turnover and CEO Tenure

We first compare the proportion of CEO turnover and forced CEO turnover in the samples of tenured and untenured CEOs. Table 7 contains the results of our analysis. Panel A presents data for all turnovers as a percentage of the total sample. As previously noted, forced turnovers comprise less than 15% of all turnovers. We expect that more tenured CEOs would be more likely to voluntarily retire than would untenured CEOs. Consistent with this premise, we find that the proportion of tenured CEOs that turn over is 10.60% compared to 8.09% for untenured CEOs (p -value is less than 0.01). Proportions do not significantly differ following either abnormally high or low meeting activity, which suggests that overall turnover is primarily related to normal succession and not a consequence of board monitoring.

[Insert Table 7]

Panel B presents our results for forced turnover as a percentage of the total sample, and Panel C presents results for forced turnover as a percentage of all turnovers. Both panels tell a similar story. The proportion of forced CEO turnovers is significantly lower for tenured CEOs

(p -values less than 0.01) than for untenured CEOs. For instance, approximately 26% of turnovers are forced when the CEO has tenure of four years or less compared to 8% of the tenured CEOs. The data also suggest that tenured CEOs are less likely to be fired following increased scrutiny by directors. Following abnormally high meeting activity, the proportion of forced turnovers is 5.90% for untenured CEOs compared to 2.32% for tenured CEOs, significant at the 0.01 level. The proportions of forced turnover following abnormally low meeting activity are small and do not differ significantly across the two categories.

C. Multivariate Analysis of Forced CEO Turnover

We next estimate multivariate probit models in which our dependent variable is one for forced turnover and zero otherwise. Our primary test variables are a dummy variable that is one if the CEO tenure is greater than 4 and the interaction of this dummy variable with lagged industry-adjusted stock returns for the previous two years. We use a dummy variable for abnormal meeting activity as our measure of director monitoring. Since we include two years of lagged performance variables in our specification, we estimate our model for the complete sample and also for a sample where the CEO has been in place for two or more years. We include controls for the CEO's age, founding family membership, industry homogeneity, activists block ownership, industry homogeneity, the percentage of inside directors, the size of the board, whether the board is classified, dual CEO/chairs, the incentive compensation paid to directors, firm size, whether the firm is a takeover target, and the year of the turnover. We base p -values on robust standard errors with clustering by firm.

We note that forced turnover and the number of board meetings are likely to be endogenously determined. To control for endogeneity, we use the number of board committees

and the number of business segments as instrumental variables for the number of board meetings and abnormal meeting activity. Both instruments correlate with the meeting activity, but do not correlate with forced CEO turnover. Based on these instrumental variables, a Hausman-Wu test fails to reject the null hypothesis of exogeneity in all specifications. Depending on the specification and the sample, p -values range from 0.72 to 0.98. Therefore, we do not believe that endogeneity affects our results and report results based on the observed data.⁹

[Insert Table 8]

Table 8 presents the results of our multivariate probit analysis. Supporting the premise that tenured CEOs are less likely to be fired, the coefficient on the CEO tenure dummy variable is negative (p -values equal 0.11 and 0.04, respectively for the two samples). As expected, forced turnover positively relates to our measure for board monitoring (p -values are less than 0.01). Turnover negatively relates to lagged performance in the previous period; the coefficient on one-year lagged stock return is positive and significant (p -values are less than 0.01). Forced turnover is less likely when the CEO is a member of the founding family and older than 60 years. Forced turnover is more likely when the firm is a takeover target.

We have special interest in the interaction between CEO tenure and stock-price performance. We do not observe any interaction effect for one-year lagged performance, but the interaction with two-year lagged performance is negative and significant (p -values equal 0.02 and 0.04, respectively, for the two samples). It is not correct, however, to directly interpret the interaction term in a probit regression. The correct procedure requires that the research estimate

⁹ The results based on instrumental variables are similar, except that the number of meetings and abnormal meeting activity are not significant predictors of turnover. Notably, the signs and significance on the interaction terms between CEO tenure and past stock returns are similar.

the interaction of the total marginal effect for each observation in the sample (Norton, Wang, and Ai, 2004). We estimate the interaction effects for both one-year and two-year lagged returns. Consistent with the point estimate of the coefficient, the interaction effects for the one-year lagged return are positive for some observations, negative for others, and are not generally statistically significant. In contrast, the marginal effects for the two-year lagged return are negative for all observations and increase in significance as the probability of forced turnover increase. We report these effects in Figure 2.

[Insert Figure 2]

A perusal of Figure 2 reveals that the marginal effects of the interaction between tenure and 2-year lagged stock returns are negative for all observations, and that the z-statistic indicates significance at the 0.05 significance level (indicated by the line below zero) or better for a large percentage of the observations. We also note that the interaction effects become more negative as the probability of forced turnover increase, and that these interaction effects become significant for a greater percentage of the observations. For instance, the correlation between the estimated probability of forced turnover and the z-statistic for significance of the interaction between tenure and two-year lagged stock returns is 0.53. For observations with an estimated probability of turnover greater than or equal to 5%, the mean (median) z-statistic is -2.18 (-2.22). These results suggest that directors use information obtained in the past, as well as current information, to evaluate tenured CEOs.

To further examine this relation, we compare the lagged one- and two-year performance of tenured CEOs who are fired to that of fired untenured CEOs with at least two years of experience. In results not reported in a table, we find that the average lagged one-year lagged

industry-adjusted stock return for tenured CEOs is -11.9% compared to -2.1% for untenured CEOs. The difference is not statistically significant. The two-year lagged industry-adjusted stock return of the tenured CEO is -1.1%, compared to +16.7% for the untenured CEO. This difference is significantly significant with a p -value of 0.08. Hence, the evidence suggests that untenured CEOs are more likely to be fired for one year of bad performance, but that tenured CEOs perform poorly for a longer period of time before being forced out of office.

[Insert Table 9]

As noted previously, the relationship between the CEO and the board is unique when the CEO is a member of the founding family. Thus, we analyze separately the forced turnover of non-family CEOs and present the results of this analysis in Table 9. When we remove CEOs who are members of the founding family, the coefficient on the dummy variable that indicates CEO tenure is no longer significant. For this sample, however, the interaction between this dummy variable and the lagged performance for both of the last two years is negative and significant (p -values range from 0.00 to 0.10). We report the plots of the marginal effects for these interactions in Figure 3. Consistent with the results for the full sample, these plots reveal that the two-year lagged interactions are consistently negative and significant for a large number of observations. The interactions for the one-year lagged performance are positive at low likelihood of forced turnover, but significantly negative as the probability of turnover increases. For a probability of turnover of 5% or greater, the mean (median) z -statistic is -1.75 (-1.82). Thus, not only are boards more patient with tenured CEOs when making the retention decision, they also are more tolerant of poor performance.

[Insert Figure 3]

For completeness, we also analyze turnover in the sample of family CEOs. In untabulated results, we find that firms are less likely to fire tenured CEOs (p -value equals 0.02) and are more likely to force out the CEO following an abnormally high number of board meetings. We do not observe very many forced turnovers of family CEOs, which results in a dependent variable with a very low proportion of successes. This low proportion raises questions about the econometric validity of the analysis when we confine the sample to family CEOs. Due to the low proportion of turnovers in for family CEOs, we encourage the reader to interpret these results with caution.

V. Firm Performance Following Board Actions

Our final research question concerns whether board-of-director monitoring influences performance, or whether it is primarily to obtain information for retention and termination decisions. Thus, we examine the change in operating performance following forced turnovers, abnormally high board meetings, and abnormally low board meetings. We use operating cash flow return on assets (OCFROA), defined as operating income before depreciation and amortization divided by total assets, as our measure of operating performance. Following Barber and Lyon (1996), we match each sample firm to a matching firm by +/- 10% in prior OCFROA, +/- 30% in assets, and industry by SIC code. If we cannot obtain a match at the 4-digit level, we match at the 3-digit, 2-digit, or 1-digit levels to obtain the closest match by performance and size. If it is not possible to match on all three metrics, we give priority to obtaining the match on prior performance. We then test for changes in operating performance relative to the matching firm and base significance on non-parametric ranked sign tests.

[Insert Table 10]

Table 10 presents the results of our analysis of operating performance. We analyze the change in performance first for all firms, and then separately for untenured and tenured CEOs. Panel A presents the results for performance following forced turnovers. Performance declines in the year before forced turnover. This decline is significant for the entire sample (p -value equals 0.06) and tenured CEOs (p -value equals 0.04). The decline in performance stops following the turnover, but we do not observe any significant improvement afterward. We do not find any statistically significant change in operating performance for the three years following forced turnover.

Panel B presents changes in operating performance following abnormally high board meetings. Since board typically increase meeting frequency around any kind of CEO turnover, forced or unforced, we also include a separate analysis for CEOs that remain in place for three years following the board monitoring activity. We find that the change in performance is negative prior to increased board activity, and that it continues to decline after the increase in board meetings. For instance, performance declines by 52 basis points (p -value equals 0.01) for all firms in the year prior to abnormal monitoring. Using this prior year as a benchmark, performance decreases by 46 basis points in the first year, 88 basis points in the second year, and 1.03% in the third year. All declines are significant at the 0.10 level or better. On average, performance declines by 89 basis points (p -value equals 0.00). When the CEO remains in place, we still observe a decline in performance but the decrease is not statistically significant in all years. The performance decline is statistically significant for untenured CEOs but not for tenured CEOs. However, performance changes across the two groups are not statistically different.

Panel C presents our results for abnormally low meeting frequency. Operating performance improves in the year prior to abnormally low monitoring, and continues to improve over the three-year period after the abnormal event. However, the improvement is driven by tenured CEOs. We find statistically significant improvement in operating performance for tenured CEOs in every year after the abnormally low meeting year. For instance, tenured CEOs improve by 69 basis points in year 1, 57 basis points in year 2, and 76 basis points in year 3. On average, they improve 66 basis points following the abnormally low meeting year. In contrast, untenured CEOs exhibit statistically insignificant negative change in performance. For the entire sample, the tenured CEOs outperform the untenured CEOs by 82 basis points (p -value equals 0.08). We find a similar pattern when the same CEO is in place for all years, but the difference between the two groups is not statistically significant.

Given that monitoring is costly, it would appear that boards correctly give tenured CEOs more latitude when performance is good. It stands to reason that there are talented CEOs with short tenures and talented CEOs with long tenures. However, the average talent should be higher among the tenured CEOs than among untenured CEOs since untalented CEOs will be less likely to achieve significant tenure. Thus, our results suggest that performance is largely driven by CEO talent and is not caused by board-of-director monitoring. We see no evidence that board monitoring improves performance. Indeed, performance continues to decline after periods of high abnormal meeting frequency.

VI. Conclusion

High profile governance failures, large CEO salaries, and prominent media coverage of managerial excesses and scandals have refocused the attention of researchers, practitioners, and policymakers on the relationships between CEOs and the boards of directors that are charged

with overseeing these executives. To gain insight into these issues, we examine the relation between board-of director monitoring and CEO tenure. Theory suggests a negative relation between board monitoring and tenure since directors learn about CEOs over time and CEOs use bargaining power associated with tenure to negotiate for less scrutiny and more autonomy.

Consistent with this theoretical expectation, we find that board-of-director monitoring negatively relates to CEO tenure. When the CEO has more tenure, the board meets less frequently, is less likely to have an abnormally high number of meetings, and is more likely to have an abnormally low number of meetings. Boards monitor new CEOs from outside the firm more frequently, and CEOs who leave for a position in another firm do so after higher levels of monitoring. We also find that boards are less likely to fire CEOs with longer tenures, and consider a longer history of performance when making the retention decision on a tenured CEO. Markets react positively to the announcement of forced CEO turnover when prior performance is poor or the CEO is more tenured, and negatively to the announcement of forced CEO turnover when prior performance is good or the CEO is less tenured. Boards meet more frequently when the firm performs poorly, but neither long-tenured nor short-tenured managers improve performance following higher meeting frequency. Improvements in performance precede years with abnormally low meeting frequency. Tenured CEOs continue to improve performance after low meeting frequency, but untenured CEOs do not.

Recent debate has focused on governance as an equilibrium mechanism and whether regulation can improve shareholder welfare (see, e.g., Bebchuk and Fried, 2003, Mulherin, 2005, Weisbach, 2006). Our results suggest the presence of a constrained optimal equilibrium in which boards make tradeoffs between the costs and benefits of monitoring. Boards monitor in order to obtain information that they use to decide whether to retain or fire the CEO; the evidence fails to

indicate that monitoring causes performance improvements. Although the evidence supports a bargaining equilibrium in which tenured CEOs appear to exert some influence over directors, it may be the case that this influence is part of the cost of retaining managerial talent. One possible interpretation of our results is that talented CEOs are in short supply. This is not to say, however, that policy changes could not lead to a new equilibrium in which shareholder welfare is enhanced. The extent to which efforts to reform governance will succeed in producing a system of governance mechanisms that better serve shareholders remains an important and interesting question.

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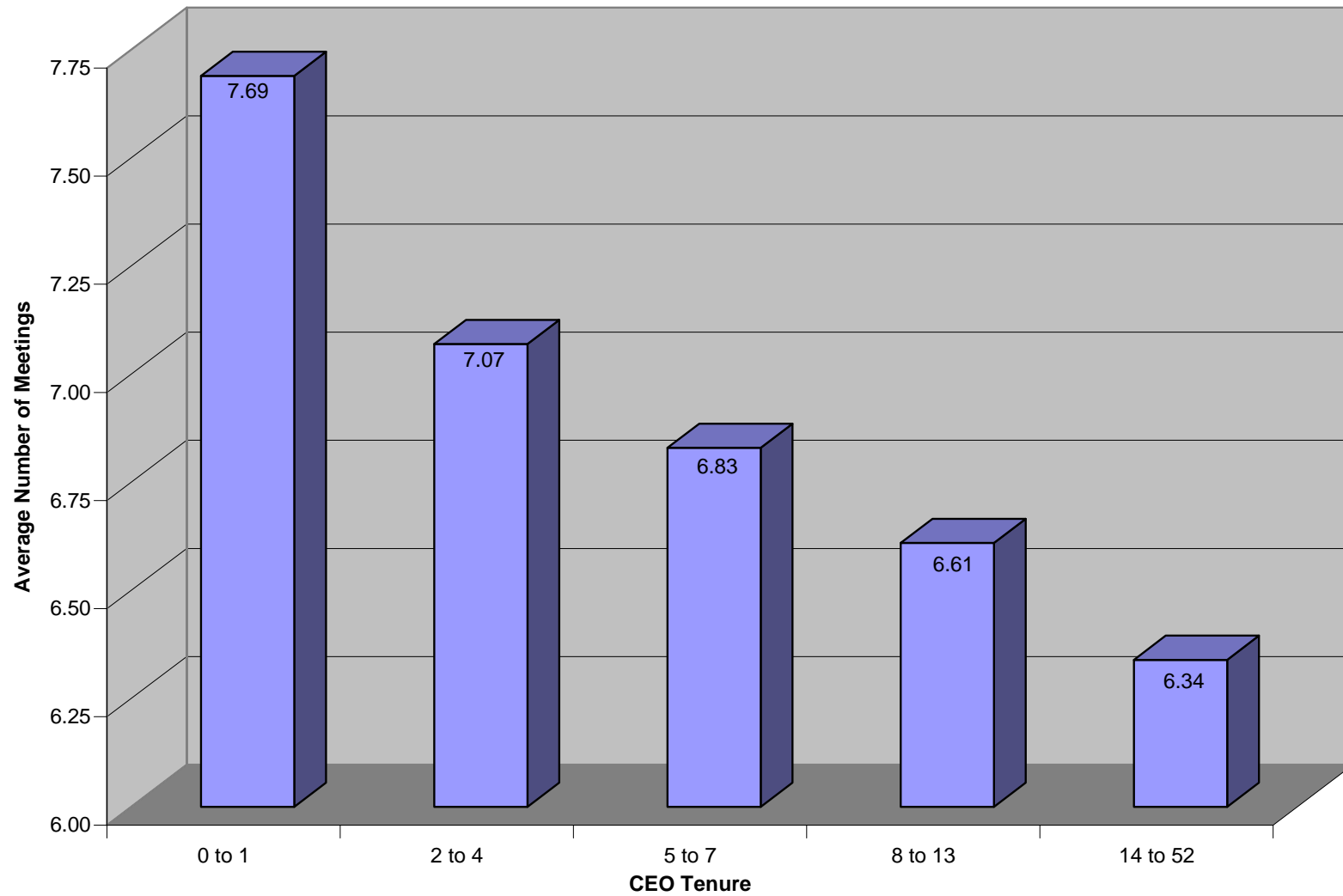


Figure 1. Average Number of Board Meetings by CEO Tenure Quintile

Table I
Descriptive Statistics

This table reports descriptive statistics on board meeting and governance characteristics for 1,324 firms and 8,109 firm-years from 1995 to 2002. CEO tenure is the time in years from the starting date to the year of the analysis. Meetings are the number of board meetings in a fiscal year. An abnormally high (low) meeting year is any firm-year in which the number of meetings is more than one standard error below (above) the predicted number of meetings. To predict the number of meetings in a year, we estimate a regression with the number of meetings as the dependent variable and firm size and dummy variables for industry and year as independent variables. We calculate industry-adjusted stock returns (return on assets) as the stock return (return on asset) of the firm less the median stock return (return on asset) in the industry based on the firm's four-digit SIC code, and the market capitalization as the sum of the share price at the end of the fiscal year times the number of shares outstanding. We classify a CEO turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigns or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60. We winsorize all variables at 1% and 99% levels.

	Mean	Median	Maximum	Minimum	Standard Deviation
Board meetings per year	6.90	6	36	1	2.88
Abnormally high meeting years (% of obs.)	7.29				
Abnormally low meeting years (% of obs.)	5.46				
CEO tenure (years)	8.31	6	52	0	8.48
CEO Age	55.35	56	91	26	7.97
CEO turnover (% of obs.)	9.52				
Forced CEO Turnover (% of obs.)	1.38				
Forced CEO Turnover (% of turnovers)	14.51				
CEO is member of the founding family (% of obs.)	25.26				
CEO chairs the board (% of obs.)	68.78				
Number of directors on the board	9.10	9	26	3	2.72
Inside directors (% of board)	27.67	25	100	0	13.88
Number of director committees	3.49	3	10	0	1.29
Classified board (% of obs.)	59.11				
Pays directors equity compensation (% of obs.)	77.74				
Pays directors meeting fees (% of obs.)	77.57				
Management ownership (% of shares)	4.92	1.11	44.3	0.01	8.71
Activist block holdings (% of shares)	0.24	0	20.91	0	1.57
Number of strategic activities by the firm	3.02	2	34	0	.12
Assets (\$ millions)	3,803.85	956.27	55,552	56.50	8,282.23
Number of business segments in the firm	2.84	3	10	1	1.84
Industry-adjusted return on assets in year _{t-1} (%)	3.40	3.26	24.90	-38.28	8.81

Table II
Comparison of Board Meetings by CEO Tenure

This table presents univariate analysis on board meeting and CEO tenure for the sample of 1,324 firms and 8,109 firm-years from 1995 to 2002. CEO tenure is the time in whole years from the starting date to the year of the analysis. Meetings are the number of board meetings in a fiscal year. We classify a CEO turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigns or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60.

	All Observations			Non-turnover Years			Turnover Years			Forced Turnover Years		
	Obs.	Mean	Median	Obs.	Mean	Median	Obs.	Mean	Median	Obs.	Mean	Median
Panel A: Comparison of Meeting Frequency for CEO Tenure Below the Sample Median and Above the Sample Median												
CEO tenure < 6 years	3,998	7.29	7	3,669	7.19	7	329	8.47	8	82	9.07	8.5
CEO tenure ≥ 6 years	4,111	6.53	6	3,668	6.39	6	443	7.65	7	30	9.30	7.5
<i>p</i> -values for difference		0.00	0.00		0.00	0.00		0.00	0.00		0.83	0.61
Panel B: Comparison of Meeting Frequency for CEO Tenure in the Bottom Quartile and in the Top Quartile												
CEO tenure ≤ 2 years	2,256	7.50	7	2,085	7.42	7	171	8.46	7	51	8.50	8
CEO tenure ≥ 12 years	2,085	6.36	6	1,869	6.23	6	216	7.48	7 ^b	13	8.69	7
<i>p</i> -values for difference		0.00	0.00		0.00			0.01	0.00		0.90	0.76
Panel C: Comparison of Meeting Frequency for CEO Tenure in the Second Quartile and in the third Quartile												
2 years < CEO tenure < 6 years	1,732	7.02	6	1,584	6.87	6	158	8.49	8	31	10.00	10
6 years ≤ CEO tenure < 12 years	2,026	6.70	6 ^a	1,799	6.56	6 ^a	227	7.82	7	17	9.76	8
<i>p</i> -values for difference		0.00	0.00		0.00			0.07	0.02		0.88	0.46

^aThe distribution for the third quartile is significantly greater than the distribution for the second quartile in a no-parametric two-sample Wilcoxon test.

^bThe distribution for the top quartile is significantly greater than the distribution for the bottom quartile in a no-parametric two-sample Wilcoxon test.

Table III
Analysis of Board Meeting Frequency and CEO Tenure

The dependent variable is the number of board meetings in a fiscal year for the Poisson model, the log of the number of meetings in the two-stage least squares estimation. The sample size is 1,324 firms and 8,109 firm years from 1995 to 2002. CEO tenure is the time in whole years from the starting date to the year of the analysis. We calculate industry homogeneity as in Parrino (1997), and industry-adjusted return on assets as the return on assets of the firm less the median return on assets in the industry based on the firm's four-digit SIC code. We present *p*-values, based on robust estimates of standard errors with firm clustering, in parentheses. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

	Number of meetings (Poisson)		Log (meetings) (Two-stage least squares)	
Log (CEO tenure)	-0.0618*** (0.00)	-0.0616*** (0.00)	-0.0678*** (0.00)	-0.0667*** (0.00)
Ind. Adjusted ROA _{t-1}	-0.2770*** (0.00)	-0.1908** (0.03)	-0.1884*** (0.00)	-0.1159* (0.09)
Ind. Adjusted ROA _{t-1} X homogeneous industry (0/1)		-0.4066** (0.02)		-0.3274** (0.02)
Inside directors (% of board)	-0.1866*** (0.00)	-0.1857*** (0.00)	-0.1689*** (0.00)	-0.1679*** (0.00)
Log (number of directors on the board)	-0.1252*** (0.00)	-0.1244*** (0.00)	-0.0604** (0.02)	-0.0597** (0.02)
Number of committees of the board	0.0163** (0.02)	0.0161** (0.02)	0.0118** (0.04)	0.0116** (0.04)
Classified board (0/1)	-0.0010 (0.95)	-0.0021 (0.89)	-0.0019 (0.88)	-0.0029 (0.82)
CEO chairs the board (0/1)	0.0083 (0.57)	0.0086 (0.56)	0.0176 (0.31)	0.0172 (0.32)
CEO is member of the founding family (0/1)	0.0330* (0.09)	0.0340* (0.08)	0.0281 (0.17)	0.0284 (0.16)
Pays directors equity-based compensation (0/1)	0.0629*** (0.00)	0.0622*** (0.00)	0.0524*** (0.00)	0.0520*** (0.00)
Pays directors a fee per meeting attended	0.0221 (0.18)	0.0219 (0.18)	0.0141 (0.30)	0.0137 (0.31)
Management ownership	-0.3645 (0.16)	-0.3633 (0.16)	-0.2376 (0.27)	-0.2396 (0.27)
Management ownership squared	0.0718 (0.92)	0.0690 (0.92)	-0.1195 (0.82)	-0.1160 (0.83)
Activist institutional block ownership (%)	0.7993 (0.12)	0.8579* (0.10)	0.4733 (0.19)	0.5204 (0.15)
Number of business segments in the firm (%)	0.0113*** (0.01)	0.0110*** (0.01)	0.0111*** (0.00)	0.0109*** (0.00)
Log (assets)	0.0466*** (0.00)	0.0461*** (0.00)	0.0346*** (0.00)	0.0342*** (0.00)
Log (number of strategic activities by the firm)	0.0133* (0.09)	0.0134** (0.09)	0.0136** (0.04)	0.0138** (0.03)
Homogeneous industry (0/1)	-0.0584*** (0.00)	-0.0479*** (0.00)	-0.0476*** (0.00)	-0.0382*** (0.00)
Year dummy variables (0/1)	Yes	Yes	Yes	Yes
Adjusted/Pseudo R ²	0.1225	0.1239	0.1224	0.1239

Table IV

Analysis of Board Meeting Frequency and CEO Tenure by Founding Family Membership

The dependent variable is the number of meetings for the Poisson model, the log of the number of meetings in the two-stage least squares estimation. The sample size is 1,121 firms and 6,060 firm years from 1995 to 2002. CEO tenure is the time in whole years from the starting date to the year of the analysis. Meetings are the number of board meetings in a fiscal year. We calculate industry homogeneity as in Parrino (1997), and industry-adjusted return on assets as the return on assets of the firm less the median return on assets in the industry based on the firm's four-digit SIC code. We present *p*-values, based on robust estimates of standard errors with firm clustering, in parentheses. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

	Number of meetings (Poisson)		Log (meetings) (Two-stage least squares)	
	Non-family CEO	Family CEO	Non-family CEO	Family CEO
Log (CEO tenure)	-0.0732*** (0.00)	-0.0262 (0.12)	-0.1075*** (0.00)	0.0198 (0.59)
Ind. Adjusted ROA _{t-1}	-0.1310 (0.18)	-0.3118* (0.08)	-0.0361 (0.62)	-0.2429 (0.11)
Ind. Adjusted ROA _{t-1} X homogeneous industry (0/1)	-0.4224** (0.03)	-0.5156 (0.15)	-0.3526** (0.02)	-0.4704* (0.10)
Inside directors (% of board)	-0.1654*** (0.01)	-0.2460** (0.03)	-0.1498*** (0.00)	-0.2183*** (0.01)
Log(number of directors on the board)	-0.1209*** (0.00)	-0.1119* (0.09)	-0.0571** (0.04)	-0.0350 (0.47)
Number of committees of the board	0.0176** (0.02)	0.0017 (0.91)	0.0106* (0.10)	-0.0002 (0.99)
Classified board (0/1)	-0.0122 (0.46)	0.0236 (0.470)	-0.0140 (0.31)	0.0214 (0.40)
CEO chairs the board (0/1)	0.0086 (0.60)	0.0156 (0.63)	0.0380* (0.07)	-0.0075 (0.82)
Pays directors equity-based compensation (0/1)	0.0376** (0.04)	0.1212*** (0.00)	0.0258* (0.08)	0.1065*** (0.00)
Pays directors a fee if attend meeting	0.0540*** (0.00)	-0.0527 (0.11)	0.0407*** (0.01)	-0.0431* (0.10)
Management ownership	-0.7396** (0.02)	0.0114 (0.98)	-0.3320 (0.24)	-0.0416 (0.90)
Management ownership squared	1.1449 (0.26)	-0.8597 (0.380)	0.2239 (0.78)	-0.6407 (0.39)
Activist institutional block ownership (%)	1.0134* (0.09)	0.4795 (0.680)	0.6744* (0.10)	0.3088 (0.72)
Number of business segments in the firm (%)	0.0035 (0.44)	0.0364*** (0.00)	0.0053 (0.16)	0.0266*** (0.00)
Log(assets)	0.0477*** (0.00)	0.0379*** (0.01)	0.0352*** (0.00)	0.0236** (0.05)
Log(number of strategic activities by the firm)	0.0196** (0.02)	-0.0003 (0.99)	0.0208*** (0.00)	-0.0005 (0.97)
Homogeneous industry (0/1)	-0.0428*** (0.01)	-0.0496 (0.16)	-0.0342** (0.02)	-0.0357 (0.20)
Year dummy variables (0/1)	Yes	Yes	Yes	Yes
Adjusted/Pseudo R ²	0.1315	0.1388	0.1096	0.1072
Observations	6,060	2,049	6,060	2,049

Table V

Analysis of Board Meeting Frequency and CEO Tenure by Industry

We present an analysis of board meeting frequency and CEO tenure with interactions for the high tech industry, the retail industry, and the manufacturing industry. The dependent variable is the number of board meetings in a fiscal year. The sample size is 1,324 firms and 8,109 firm-years from 1995 to 2002. CEO tenure is the time in whole years from the starting date to the year of the analysis. Meetings are the number of board meetings in a fiscal year. We include all control variables as in the analysis presented in Table III and Table IV and obtain similar results to those presented in Table III. To be parsimonious, we do not present the coefficients on the control variables. We present *p*-values, based on robust estimates of standard errors with firm clustering, in parentheses. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

High tech industry (0/1)	0.4077*			0.4071*
	(0.09)			(0.10)
Retail industry (0/1)		-0.0374		0.0040
		(0.82)		(0.98)
Manufacturing industry (0/1)			-0.1886	-0.1364
			(0.25)	(0.42)
Log(CEO tenure)	-0.0550***	-0.0633***	-0.0662***	-0.0606***
	(0.00)	(0.00)	(0.00)	(0.00)
Log(CEO tenure) X high tech (0/1)	-0.0672**			-0.0623**
	(0.02)			(0.03)
Log(CEO tenure) X retail (0/1)		0.0126		0.0093
		(0.55)		(0.67)
Log(CEO tenure) X manufacturing (0/1)			0.0200	0.0143
			(0.21)	(0.39)
Inside directors (% of board)	-0.1461**	-0.1822***	-0.2036***	-0.1437**
	(0.02)	(0.00)	(0.00)	(0.05)
Inside directors (%) X high tech (0/1)	-0.3576***			-0.3638**
	(0.03)			(0.03)
Inside directors (%) X retail (0/1)		-0.0209		-0.0594
		(0.90)		(0.73)
Inside directors (%) X manufacturing (0/1)			0.0954	0.0296
			(0.46)	(0.83)
Log(number of directors on the board)	-0.1169***	-0.1236***	-0.1165***	-0.1005***
	(0.00)	(0.00)	(0.00)	(0.01)
Log(number of directors) X high tech (0/1)	-0.0894			-0.1029
	(0.34)			(0.29)
Log(number of directors) X retail (0/1)		-0.0040		-0.0238
		(0.95)		(0.74)
Log(number of directors) X manufacturing (0/1)			0.0250	0.0103
			(0.70)	(0.88)
Control variables from Table III	Yes	Yes	Yes	Yes
Year dummy variables (0/1)	Yes	Yes	Yes	Yes
Pseudo R ²	0.1309	0.1244	0.1313	0.1390

Table VI**Meeting Frequency for New CEOs and CEOs Who Leave for a Position in Another Firm**

The actual number of meetings is the number of board meetings in a fiscal year. To predict the number of meetings in a year, we estimate a regression with the number of meetings as the dependent variable and firm size and dummy variables for industry and year as independent variables. We classify a new CEO as an insider if he is an employee of the firm prior his CEO appointment and is an outsider if he is not an employee of the firm prior his CEO appointment. We classify a CEO leaving as voluntary if the CEO leaves the firm when he/she is below the age of 60, is not forced out, and is not retired. We identify a staying CEO to match with every leaving CEO. We use the following criteria to identify a match: (1). Same tenure; (2). Firm size is plus or minus 30% of the leaving CEO's firm size; (3). In the same industry as the leaving CEO, first match by 4 digit SIC codes, then by 3 digit, by 2 digit, by 1 digit; (4) has the closest past year accounting performance as the leaving CEO; (5) not forced out later on.

	Obs.	Number of annual board meetings		Actual number of meetings less predicted number of meetings	
		Mean	Median	Mean	Median
Panel A: Comparison of First-year Meeting Frequency for New CEOs					
New CEO is an outsider	176	8.96	8.00	2.01	1.14
New CEO is an insider	594	7.44	7.00	0.72	-0.03
<i>p</i> -value for difference		0.00	0.00	0.00	0.00
Panel B: Matched-sample Comparison of Meeting Frequency for CEOs Who Leave for a Position in Another Firm					
One year prior to leaving					
CEO who leaves	130	7.86	7	0.89	0.56
Matched CEO who stays	130	7.13	6	0.24	-0.41
<i>p</i> -value for difference		0.03	0.06	0.05	0.12
Two years prior to leaving					
CEO who leaves	80	7.13	7	0.29	-0.23
Matched CEO who stays	80	6.48	6	-0.40	-0.79
<i>p</i> -value for difference		0.11	0.09	0.08	0.04

Table VII
Stock Price Reaction to the Announcement of Forced CEO Turnover

This table presents the mean cumulative abnormal returns (CARs) for the announcement of 141 forced CEO turnovers. We classify a CEO turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigns or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60. CEO tenure is the time in whole years from the starting date to the year of the analysis. We present results for two event windows: day -1 to day 1 and day -2 to day 1 and for two benchmark models: the market model and the Fama-French three factor model plus a momentum factor. The market model uses value weighted market index. In parentheses, we report t-statistics for the market model CARs based on Patell (1976) and on the time series crude dependence adjustment method (see Brown and Warner, 1980) for the four-factor model. We also report a nonparametric rank test statistic to test whether percentage of positive returns differs significantly from the estimation period. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

	Obs.	Market model		Four-factor model	
		CAR (%)	Percentage positive (%)	CAR (%)	Percentage positive (%)
All forced Turnovers					
<i>t=-1 to t=+1</i>	141	0.91 (1.57)	57.45** (2.08)	0.82 (1.46)	53.19 (1.04)
<i>t=-2 to t=+1</i>	141	1.15* (1.91)	60.28*** (2.75)	0.93 (1.44)	55.32 (1.55)
Prior one-year industry-adjusted stock return is positive					
<i>t=-1 to t=+1</i>	27	-3.86** (-2.29)	40.74 (-0.68)	-4.12*** (-4.01)	33.00 (-1.45)
<i>t=-2 to t=+1</i>	27	-3.15 (-1.35)	48.15 (0.09)	-3.64*** (-3.07)	37.04 (-1.06)
Prior one-year industry-adjusted stock return is negative					
<i>t=-1 to t=+1</i>	114	2.05*** (2.90)	61.49*** (2.90)	1.99*** (2.97)	57.89* (1.88)
<i>t=-2 to t=+1</i>	114	2.16*** (2.77)	62.28*** (2.70)	2.00*** (2.59)	58.77** (2.06)
CEO tenure \geq 6 years					
<i>t=-1 to t=+1</i>	38	4.37*** (5.29)	68.42*** (3.53)	3.97*** (3.86)	73.68** (3.13)
<i>t=-2 to t=+1</i>	38	4.10*** (5.26)	71.05*** (3.61)	3.88*** (3.82)	68.42*** (3.61)
CEO tenure < 6 years					
<i>t=-1 to t=+1</i>	103	0.91 (0.24)	59.22 (-0.98)	0.72 (0.82)	50.49 (-1.35)
<i>t=-2 to t=+1</i>	103	0.61 (-0.24)	51.46 (-1.47)	0.50 (0.67)	47.57* (-1.89)
CEO tenure > 3 years					
<i>t=-1 to t=+1</i>	62	3.17*** (5.38)	66.13* (2.33)	3.19** (2.70)	66.13* (2.08)
<i>t=-2 to t=+1</i>	62	3.72*** (6.24)	66.13** (2.71)	3.85*** (3.76)	62.90** (2.62)
CEO tenure \leq 3 years					
<i>t=-1 to t=+1</i>	79	0.81 (-0.83)	58.23 (-0.78)	0.35 (0.39)	49.37 (-1.32)
<i>t=-2 to t=+1</i>	79	-0.15* (-1.97)	49.37* (-1.71)	-0.50 (-0.66)	45.57* (-2.22)

Table VIII

Analysis of Forced CEO Turnover when the CEO has at Least Two Years of Tenure

This table presents probit model results for the forced turnover of CEOs with two years or more of performance. We present marginal effects evaluated at the mean except for interaction terms, which are the average of marginal effects at each point (Norton, Wang, and Ai, 2004). The dependent variable equals one for forced CEO turnover and zero otherwise. We classify a CEO turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigns or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60. CEO tenure is the time in whole years from the starting date to the year of the analysis. We calculate industry-adjusted stock return as the stock return of the firm less the median stock return in the industry based on the firm's four-digit SIC code. Industry homogeneity is calculated as in Parrino (1997). We present *p*-values, based on robust estimates of standard errors with firm clustering, in parentheses. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

	All Firms	Non-family Firms
Log (number of board meetings)	0.0118*** (0.00)	0.0132*** (0.00)
CEO tenure \geq median of six years (0/1)	-0.0033** (0.03)	-0.0037* (0.06)
CEO age is greater than 60 (0/1)	-0.0025* (0.06)	-0.0041** (0.03)
CEO is a member of the founding family (0/1)	-0.0036** (0.03)	
Industry-adjusted stock return in year _{t-1}	-0.0053*** (0.01)	-0.0073** (0.02)
Industry-adjusted stock return in year _{t-2}	-0.0017 (0.37)	-0.0017 (0.51)
Ind. adj. stock return _{t-1} X dummy _(CEO tenure \geq 6)	-0.0006 (0.83)	-0.0114 (0.82)
Ind. adj. stock return _{t-2} X dummy _(CEO tenure \geq 6)	-0.0020 (0.80)	-0.0049 (0.58)
Homogeneous industry (0/1)	-0.0009 (0.48)	-0.0020 (0.25)
Activist institutional block ownership (%)	-0.0100 (0.76)	-0.0168 (0.71)
Percentage of inside directors	0.0062 (0.20)	0.0110 (0.13)
Log(number of directors on the board)	-0.0056* (0.06)	-0.0065 (0.13)
Classified board (0/1)	0.0014 (0.27)	0.0023 (0.21)
CEO chairs the board (0/1)	-0.0013 (0.39)	-0.0017 (0.44)
Pays directors equity-based compensation (0/1)	-0.0006 (0.70)	0.0017 (0.45)
Pays directors a fee if attend meeting	0.0006 (0.70)	0.0016 (0.45)
Log (assets)	0.0010** (0.05)	0.0012 (0.12)
Firm is target of takeover attempt (0/1)	0.0042*** (0.01)	0.0076*** (0.00)
Year dummy variables (0/1)	Yes	Yes
Pseudo R ²	0.1485	0.1363
Observations	6590	4,685

Table IX

Change in Operating Performance Following Abnormal Monitoring Events

The table presents change in operating performance following board monitoring decisions. CEO tenure is the time in whole years from the starting date to the year of the analysis. An abnormally high (low) meeting year is any firm-year in which the number of meetings is more than one standard error below (above) the predicted number of meetings. To predict the number of meetings in a year, we estimate a regression with the number of meetings as the dependent variable and firm size and dummy variables for industry and year as independent variables. We classify a CEO turnover as forced when news stories indicate that the CEO has been ousted, there were conflicts between the CEO and the board, the CEO resigned following poor performance, the CEO resigns or retired following an SEC investigation or class action lawsuit, or the CEO resigns without an outside job appointment within six months and the CEO is below the age of 60. We report changes in operating performance for year -1 to year 0, year -1 to +1, year -1 to +2, year -1 to +3 and three-year averages. Year 0 is the year of CEO turnover. We indicate significance at the 1%, 5%, and 10% levels with ***, **, and *, respectively.

	Obs.	t=-1 to t=0	t=-1 to t=+1	t=-1 to t=+2	t=-1 to t=+3	Three-year average
Panel A: Forced Turnovers						
All Firms	105	-2.24* (0.06)	-2.24 (0.43)	-1.41 (0.54)	0.24 (0.98)	-1.32 (0.58)
CEO tenure < 6 years	77	-2.24 (0.23)	-2.14 (0.43)	-0.98 (0.68)	1.88 (0.61)	-0.94 (0.82)
CEO tenure ≥ 6 years	28	-1.86 (0.13)	-2.55 (0.84)	-2.35 (0.59)	-1.82 (0.40)	-1.49 (0.45)
<i>p</i> -value for the difference		0.64	0.72	0.87	0.35	0.66
Panel B: Abnormally high board meeting frequency						
All Firms	591	-0.31* (0.07)	-0.45 (0.22)	-0.95** (0.05)	-1.15*** (0.03)	-0.99*** (0.03)
CEO tenure < 6 years	330	-0.48* (0.08)	-0.61 (0.24)	-1.04** (0.03)	-1.01** (0.05)	-1.11** (0.03)
CEO tenure ≥ 6 years	261	0.10 (0.42)	-0.21 (0.58)	-0.74 (0.63)	-1.24 (0.23)	-0.52 (0.38)
<i>p</i> -value for the difference		0.48	0.72	0.25	0.72	0.44
Panel C: Firm is target of takeover attempt						
All Firms	383	-0.33 (0.32)	-0.55 (0.52)	-0.34 (0.74)	-0.25 (0.86)	-0.48 (0.86)
CEO tenure < 6 years	189	-0.49 (0.24)	-0.96** (0.04)	-0.90 (0.20)	-0.79 (0.25)	-0.94* (0.06)
CEO tenure ≥ 6 years	194	-0.19 (0.83)	0.42 (0.25)	1.14* (0.09)	0.33 (0.18)	0.19 (0.11)
<i>p</i> -value for the difference		0.55	0.02**	0.03**	0.08*	0.02**
Panel D: Abnormally low board meeting frequency						
All Firms	443	0.34*** (0.01)	0.74*** (0.01)	1.31*** (0.00)	1.17** * (0.00)	0.83*** (0.00)
CEO tenure < 6 years	171	0.85** (0.02)	-0.00 (0.51)	0.05 (0.96)	0.11 (0.86)	-0.05 (0.88)
CEO tenure ≥ 6 years	272	0.00** (0.09)	1.29*** (0.00)	1.68*** (0.00)	2.14*** (0.00)	1.33*** (0.00)
<i>p</i> -value for the difference		0.49	0.15	0.01***	0.02**	0.01***