Beyond Independence: CEO Influence and the Internal Operations of the Board *

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ABSTRACT

Using a detailed dataset on the meeting sub-structure of the board, this paper investigates the time trends and cross-sectional determinants of internal boardroom control. First, I document that the principal governance reform following Sarbanes-Oxley was the removal of the CEO as a participating member in board monitoring and investment decisions. Consistent with this being against the preferences of the average CEO, I find that CEO power is negatively related to monitoring work handled outside of the CEO's presence and positively related to board-time spent in the executive committee. Together the results highlight internal operations as governance concerns of the modern board.

I Introduction

Beginning in the early 1980s, shareholder advocacy groups, academics, and institutions devoted to corporate governance issues started calling for increased outside director representation on U.S. boards.[1] Accompanying these demands for board reform, the composition of the average board changed in a material manner over the latter half of the 20th century, with the fraction of outside directors serving on the board roughly increasing from 50% to 80%.[2] Moreover, by the time that the NYSE and NASDAQ first formally imposed board independence requirements in 1999 for firms listed on their exchanges, the vast majority of firms already had 'outsider-dominated' boards, and further, many firms had the CEO sitting as the sole inside director on the board.

Yet, despite this level of board independence, a series of corporate malfeasance, accounting, and backdating scandals occurred at the turn of the 21st century.[3] If these corporate failures were at least partially attributable to lax oversight on the part of the board, this suggests that the mere presence of many outside directors on the board might not be sufficient. If CEOs have the ability to alter the monitoring operations of the board through alternative channels, such as presiding over the decisions made on the board, or implementing policies removed from the oversight of the full board (via the executive committee), then the high level of board independence witnessed at the time of the scandals does not necessarily imply that CEOs had forfeited their control or influence over board proceedings. Nor does it mean that the overwhelming number of 'outsider-dominated' boards which existed at this point in time were,

[1] See the American Law Institute (1982) and The Business Roundtable (1997) for evidence pertaining to governance advocacy groups demands for greater board independence. For academic research on the issue of board independence, see Weisbach (1988) for evidence on outside directors' ability to remove poor performing CEOs, and Fama and Jensen (1983) for additional supporting conjectures on the value of independent boards.

[2] Lehn et al. (2005) study the evolution of 81 firms over time and note that independence increased from 50% to 83% during the second half of the 20th century. Coles et al. (2008) provide similar evidence which demonstrates that the median percent of insiders on the board had shrunk to 20% over the 1990s.

[3] See Heron and Lie (2007) for a time-line of option backdating events to hit U.S. public firms. Firms involved in these accounting/backdating scandals were generally in accordance with shareholder advocacy groups/institutional investors' recommendations (i.e. National Association of Corporate Directors (2001), TIAA-CREF) regarding board independence.

in fact, dominated by outside directors. Therefore, to have a clearer picture of both control within the boardroom, and how CEO influence over the board has truly changed over time, a deeper and more robust understanding of the internal workings of the board seems imperative.

In this paper, I explore just such an alternative dimension of 'independence' on the board: the extent to which outside directors are able to handle their board responsibilities removed from the influence of the CEO, or conversely, the CEO's ability to control the internal monitoring and investment decision-making processes of the board. Using a detailed, hand-collected dataset on board committee and meeting structure, I proxy for outside directors' control over board proceedings using the fraction of meetings which outside directors hold in independent monitoring committees (audit, compensation, nominating) removed from the CEO's voting influence. This measure, often noted as 'the fraction of meetings held in independent monitoring committees' or 'the fraction of board work controlled by outside directors', is constructed as the ratio of the number of meetings which outside directors hold in independent committees to the number of meetings which the CEO presides over (has a voting stake in).[4]

Implicit in the construction of this measure is the idea that having directors perform their board responsibilities in the presence of management can alter board oversight and may benefit the CEO in some manner. Past research and anecdotal evidence on the inner-workings of boards provide support for this contention. Charles Elson notes that directors face significant pressure when speaking in front of the executive officers of the firm: "In a boardroom, there is nothing more difficult to do than to talk about the CEO while the CEO is present."[5] In addition, Mace (1986) details a case study where an independent director was removed from the firm's proxy statement after openly disagreeing with management during a board meeting. Hence, if

[4]Specifically, this primary measure of the operational control on the board is constructed as the number of meetings held in a particular independent monitoring committee divided by the sum of full board meetings, executive committee meetings, and the number of meetings in the particular monitoring committee. Alternative constructs to this measure, and issues associated with the measure are discussed in full in Section II.E.

[5]See 'Emerging Trends in Corporate Governance', a supplement to *Corporate Board Member*, 2001.

CEOs desire to control board oversight, then this measure appropriately functions to capture the operational control over monitoring decisions on the board and the degree to which outside directors handle their duties free from CEO interference.

With this measure of internal board control in mind, I empirically investigate how CEO influence over the operations of the board has changed over time. Following the various corporate malfeasance scandals of 2000-2002, the Sarbanes-Oxley Act of 2002 (SOX) and the NYSE/NASDAQ listing requirement changes in 2003 were enacted with the intention of being a comprehensive solution to the governance problems which brought about the scandals. However, since most firms were already in compliance with the board independence mandates, did these events have any real impact on the CEO's control over the board? Examining board changes for a sample of 586 NYSE firms, I document that the structure of the board underwent a significant transformation between 1999 and 2005, not in terms of size or independence, but in terms of the internal decision-making processes on the board.

While board independence increased a marginal 5% between 1999 and 2005, the structural form of the average board transitioned from one where the CEO was present for and had a voting stake in the majority of board meetings, to a structural form where the vast majority of board meetings were held by outside directors in independent committees, removed from the CEO's voting influence. In particular, in 1999 the average CEO presided over 9.10 meetings a year, while outside directors held a total of 8.56 meetings in the independent monitoring committees (3.48 audit meetings, 3.98 compensation meetings, and 1.11 nominating meetings).[6] By 2005, the average CEO presided over 8.59 meetings a year, while outside directors held a total of 18.42 meetings in the independent monitoring committees (9.15 audit meetings, 5.45 compensation meetings, and 3.82 nominating meetings). This implies that 48% of board meetings were held in independent committees in 1999, and 68% of board meetings

[6]Meetings which the CEO presides over (has a voting stake in) is constructed as the number of full board meetings plus the number of committee meetings which the CEO serves as a member on. Further, throughout this investigation, 'independent monitoring committees' denote committees where outside directors are the sole voting members.

were held in independent committees in 2005. Or, alternatively, the average CEO participated as a member in 52% of meetings held in 1999 and only 32% of meetings in 2005. On an individual committee basis this entails that over this time period the fraction of meetings held outside of the CEO's voting influence in the independent audit, compensation, and nominating committees rose 80, 30, and 200 percent, respectively. The fact that the CEO presided over fewer board meetings, in conjunction with the significant increase in work allocation to independent monitoring committees, suggest that the CEO's influence over the monitoring decision-making processes on the board decreased over this period.

Though these results highlight a shift in board oversight control, equally important to our understanding of how board structure changed during this period is the control over the investment operations of the board. If the executive committee functions as an environment where the CEO may implement policy decisions (i.e. dividend and capital structure changes) with far fewer outside directors scrutinizing such decisions, then how did the operations of this committee change surrounding the regulatory events of 2002-2003? I document that in 1999 32% of firms held one or more meetings in the executive committee, while by 2005 only 19% of firms held one or more executive committee meetings. In a similar manner, examining the average number of meetings held in the committee, the fraction of board-time spent by the CEO in the executive committee decreased by 40% over this time period.[7] Together, these findings support the contention that the CEO's ability to side-step the oversight of the full board and implement policy/investment decisions through the executive committee were significantly curtailed between 1999 and 2005.

While past empirical research has demonstrated that SOX had a strong mechanical impact on director workloads and the risks associated with holding board positions (Linck et al. (2009)), the results presented here extend these findings by providing strong supporting evidence that

[7]The fraction of board-time spent on the executive committee is constructed as the number of meetings held in the executive committee divided by the sum of full board meetings and executive committee meetings. In addition, the number meetings held in 'miscellaneous investment committees' are few and remained relatively constant over the time period. Such results are presented in greater detail in later sections.

these regulatory events not only affected board work levels, but also the CEO's involvement in the decision-making processes of the board. Though the finding that independent monitoring committee meetings increased post-SOX is consistent with the idea that more work had to be done on the board, the fact that the number of meetings which the CEO presided over and the number of meetings held in the executive committee both significantly decreased suggest that CEO influence over board oversight/operations was abated during this time period. Given that the average board already exhibited a high degree of 'nominal independence' by 1999 (80% outsider representation), the documented changes in board structure indicate that shareholder demands for greater board scrutiny following the corporate malfeasance scandals of 2000-2002 were primarily satisfied via an alternative channel of 'independence' on the board - the removal of the CEO as a participating member in the board's internal operations.

Next, to address the issue of whether these drastic changes in board internal structure were contrary to the preferences of the CEO and how they relate to firm characteristics, I investigate the cross-sectional variation in the operational form of the board over the 2005-2006 time period. Several authors have formulated and tested numerous theories pertaining to the relationship between board composition and firm-level determinants (Raheja (2005); Lehn et al. (2005); Boone et al. (2007); Harris and Raviv (2008); Duchin et al. (2010)). Collectively these works demonstrate that board independence and size are a product of a firm's business environment, information environment, and various contracting costs. Following this line of literature, I categorize these theories on board structure into three primary hypotheses: the *scope of operations hypothesis*, the *monitoring hypothesis*, and the *negotiation hypothesis*. I extend each of these hypotheses by examining how control over the monitoring/investment decision-making processes of the board is associated with the bargaining position of the CEO, information costs for outside directors, and other firm-level factors.

In accordance with the scope of operations hypothesis, I find that the fraction of board meetings held in committees is positively related to firm size. This is consistent with the notion

advanced by Fama and Jensen (1983) that complex firms develop more hierarchical organizations. Following this, I investigate how information costs faced by outside directors and firm-level managerial private benefits relate to the operational form of the board (monitoring hypothesis). I ultimately find weak supporting evidence that monitoring costs are negatively associated with the fraction of meetings held by outside directors in monitoring committees, and that managerial private benefits are positively associated with the fraction of board meetings held in monitoring committees. Yet, this lack of conclusive evidence regarding the monitoring hypothesis is not entirely surprising given some of the indeterminate empirical results documented in the prior literature (Boone et al. (2007); Coles et al. (2008); Linck et al. (2008)).[8]

Next, I examine how CEO influence affects operational control over board proceedings. If board structure follows from a negotiation process between the CEO and the outside directors on the board (Hermalin and Weisbach (1998)), then in what manner do high power CEOs bargain for lower levels of board oversight? While prior empirical studies have demonstrated that the proportion of independent directors on the board is negatively related to measures of CEO influence (Boone et al. (2007); Linck et al. (2008)), I extend this idea by detailing that high power CEOs (high ownership, high tenure) are associated with a lower fraction of meetings held in independent monitoring committees (higher fraction of meetings held in the CEO's presence). CEO influence is also negatively related to the fraction of board-time spent in non-management executive sessions.[9] These findings suggest that CEOs who have the ability to alter board structure will pull the monitoring operations of the board away from independent committees and back toward an environment where they may preside over

[8]Boone et al. (2007) and Coles et al. (2008) find ultimately inconclusive results (not in accordance with the monitoring hypothesis) regarding the association between R&D expenditures (monitoring costs) and board independence. Similarly, Linck et al. (2008) document an insignificant relation between board size and R&D. With respect to the effect of managerial private benefits on board composition, Boone et al. (2007) find an insignificant association between independence and free cash flow.

[9]Vafeas (1999) provides evidence that CEO bargaining power is negatively related to the number of board meetings. These results extend such a finding by demonstrating that high bargaining position CEOs prefer to have outside directors handle their monitoring operations in their presence as opposed to independent committees.

monitoring discussions and influence board oversight.

Extending the negotiation hypothesis to the issue of control over the policy decisions of the board, I find that the bargaining power of the CEO is positively associated with the fraction of board meetings handled in the executive committee. CEOs with the capability to affect the structure of board operations spend less time convening the full board for approval on investment decisions, and instead bypass the oversight of outside directors by enacting such decisions through the executive committee. In total, these results highlight the mechanism by which powerful CEOs, despite being subject to boards with 80+% outsider representation, still control board-level investment and monitoring decisions in the modern boardroom.[10]

Together, the results associated with the negotiation hypothesis offer support for the notion that the drastic shift in the operational form of the board between 1999 and 2005 was contrary to the preferences of the CEO. Since CEOs who have a greater ability to influence board structure allocate a lower fraction of meetings to be held outside of their presence in independent monitoring committees, and a higher fraction of meetings to be held in the executive committee, the documented changes in board operations over the 1999 to 2005 time frame (more board-time spent in outsider controlled committees, and fewer meetings held in the executive committee) were against the desires of the CEO.

Finally, to validate whether or not shifting board monitoring operations away from the CEO's presence has a material impact on firm performance, I look at performance changes for firms holding excess meetings removed from the CEO's voting influence. Following an abnormally positive fraction of board meetings held in monitoring committees, I find that firms reverse poor levels of performance and begin to see significant positive shifts in performance two years after the event. This result holds particularly when considering valuation measures (MtB) as opposed to operating performance measures (ROA).

[10] Adams et al. (2005) demonstrate that powerful CEOs are associated with higher variability in firm performance and decisions. Further, Core et al. (1999) document that CEOs who hold the board chair position demand higher cash-based and total compensation.

Overall, the results presented here extend our understanding of board structure in two ways. First, the significant transformation in the internal operations of the board between 1999 and 2005 lends support to the idea that the second wave of board governance reform to occur in the past 60 years was one in which CEOs were removed from the decision-making processes of the board, diminishing their ability to influence and control board oversight/investment operations. Second, the results pertaining to the cross-sectional determinants of board operating form demonstrate that the internal structure of the board is an important feature to consider when discussing issues related to board control and governance in the modern board. Together, these findings shed light on a previously unexplored area of board structure, and highlight that the internal operations of the board may offer a more complete and robust understanding of 'independence' on the board.

This paper proceeds as follows. Section II develops the boards hypotheses and details the construction of the data. Section III presents the cross-sectional determinants of board operational form and the time trends. Section IV concludes the paper.

II Background Information, Data, and Summary Statistics

In this section, I first summarize how recent governance and listing requirement changes relate to this empirical investigation. Next, I highlight the existing research on the role of the board and the responsibilities of committees. Following this, I describe and extend three hypotheses in the boards literature. Finally, I detail the construction of the dataset used in this investigation and provide summary statistics.

A Post-SOX Regulatory Environment

The regulatory changes of the late 1990s and early 2000s constituted a significant shift in the governance standards applied to U.S. public firms. Beginning in 1999, NYSE and NASDAQ implemented listing rules requiring the complete independence of audit committees. Following the Enron, Tyco, and WorldCom corporate and accounting scandals, the Sarbanes-Oxley Act of 2002 (SOX) was enacted with the intention of being a thorough solution to the governance deficiencies which engendered the scandals. Included in the regulation were rules to formally declare audit committee independence, improve the quality of financial statements, and strengthen the enforcement of securities law.[11] In 2003, NYSE and NASDAQ both took measures to further strengthen the SOX regulatory requirements by mandating that publicly listed firms have a majority of independent directors on their boards. In addition, both exchanges refined the SOX definition of 'independent' board member, set rules for the composition of board committees, and required that audit committees have financially literate members.

While the two exchanges set similar listing requirements regarding audit committee composition, their rules regarding other committees differed slightly. NYSE required that all firms establish audit, nominating/governance, and compensation committees comprised entirely of independent directors and that such independent directors were to meet separately from inside board members in non-management executive sessions on a regular basis. NASDAQ took similar measures regarding committee formation, yet allowed more flexibility in the composition of these committees. NASDAQ did not explicitly require that firms have nominating or compensation committees, but compensation payable to the CEO and other officers had to be approved either by a majority of the independent directors on the board or a compensation committee of independent directors. Similarly, for these companies, nominations

[11] See The Practitioner's Guide to Sarbanes-Oxley Act, Volume 1, The American Bar Association (2004) for more information on SOX requirements.

had to be approved either by a majority of the independent directors on the board or a nominating committee of independent directors. Also, if a company elected to establish compensation and nominating committees of at least three members, then one director who is not independent under NASDAQ's rules may hold a position. In addition, both exchanges granted certain entities (e.g. controlled companies, limited partnerships, foreign private issuers, and other passive organizations) exemptions to a number of these rules regarding committee and board independence. Both exchanges instituted timetables by which firms had to comply with the rulings. In general, firms had to meet the listing requirements by late 2004, with extended time (late 2005) given to firms with staggered boards.

Given NYSE's more definitive rulings regarding committee independence, the sample of firms used in this empirical analysis is based on a set of post-SOX NYSE firms. NYSE's 2003 mandate to require the complete independence of the monitoring committees (audit, compensation, nominating/governance) enables the collection of a distinct and 'clean' dataset. Since inside directors are prohibited from serving on such committees, this yields an environment where the distinction between the influence of independent directors and inside directors (or the CEO) is easily observable. Further, this delineation between the board and its monitoring committees also allows for the development and extension of several hypotheses in the boards literature.

B Background Literature and Committees

The board of directors' responsibilities extend far beyond that of monitoring the CEO's performance and replacing the CEO, should the situation warrant it. The Business Roundtable (1990) details the five primary functions of the board: (1) review and approve the major plans and strategies of the corporation; (2) advise executive officers on corporate issues; (3) evaluate, and if necessary, replace executive officers, and set compensation practices; (4) evaluate board performance and provide shareholders a slate of candidates for the board of directors; (5)

formulate and review systems for corporate legal and regulation compliance.

Each of these responsibilities of the board may be handled by the full board, where all members discuss such issues, or may be delegated to committees, where a select few individuals focus on particular tasks. Kesner (1988) argues that the primary monitoring decisions of the board originate at the committee level. Vance (1983) notes that corporate decisions are primarily influenced by four board committees: the audit, executive, compensation, and nominating committees. Hence, the structure of committees within the board may be an important determinant of board performance if the board is primarily operating through its committees.

This notion that board oversight is a function of not only the composition of the board as a whole, but also of the structure of the board's committees has recently been advanced by various empirical works. Klein (1998) finds little association between overall board structure and performance, but does find a positive relation between the percentage of insiders on investment committees and firm performance. Xie et al. (2003) provide evidence that committee composition affects the likelihood of earnings management. The authors highlight that audit committees comprised of members with financial or corporate backgrounds are associated with smaller discretionary accruals at the firm-level. In similar fashion, Klein (2002) also documents a negative relation between audit committee independence and abnormal accruals. Shivdasani and Yermack (1999) investigate the CEO's influence over the director nominating process. The authors find that when the CEO sits on the nominating committee, or no such committee exists, fewer independent directors are chosen for available board seats.

For the purposes of this study, to understand how the internal structure of the board relates to firm determinants, it is important to first summarize how various committees operate within the board. I provide a detailed look at the tasks and responsibilities of the four committees of most importance in this study.[12] What follows below is a conglomerate description taken from

[12]Hayes et al. (2004) provide a similar look at all the functions of committees in their sample. See the authors'

firm proxy statements on the operating functions of the audit, compensation, nominating, and executive committees.

The audit committee's primary responsibilities are to oversee the financial reporting of the firm, the disclosure process, the appointment of independent auditors, and to monitor the performance of the auditors. The committee also monitors the internal control process, consulting auditors to discuss these matters, and monitors the choice of accounting policies. In addition, the committee may also be tasked with discussing risk management practices, compliance with laws and regulations, and reviewing safety and environmental audit functions.

The compensation committee's primary tasks are to review and recommend to the full board the CEO's and officers' compensation - including salary, benefits, and long-term incentive plans. The committee may also establish and monitor performance guidelines for the CEO and evaluate such performance. In addition, it can make recommendations concerning director compensation and oversee the appointment of consultants to help with such compensation issues.

The nominating/governance committee is responsible for reviewing, assessing, and nominating members of the board of directors. It also reviews criteria for new directors, deals with consultants to find appropriate new members, and recommends committee assignments within the board. The committee is also responsible for developing corporate governance principles, shaping the governance standards of the company, and is often tasked with overseeing the company's CEO succession planning process.

The executive committee is responsible for exercising the powers of the board and the affairs of the firm when the board is not in session. The committee primarily deals with dividend and capital structure decisions, and has the right to alter or change such practices (including the issuance of equity). Limitations to the powers of the executive committee are set by firm by-laws. One near universal restriction on the powers of the executive committee is that it cannot

work for a detailed look at the functions of less frequent committees (e.g. technology, pension plan, corporate responsibility).

change by-laws or amend the firm's articles of incorporation.

C Development of Cross-sectional Hypotheses

Past empirical and theoretical studies on board structure provide evidence that firm and market determinants affect the size and composition of the board. Here, I detail how these determinants relate to three primary hypotheses in the boards literature, and in turn, how these hypotheses apply to this investigation into the internal allocation of work on the board.

Fama and Jensen (1983) conjecture that the manner in which a firm is organized stems from the complexity of its operations. Large firms, or firms with more detailed and complex processes, will function in a more hierarchical manner. This notion, often referred to as the *scope of operations hypothesis*, has served as a basis for investigations into the relation between firm complexity and board structure.[13]

Through studies into the size and composition of the board, the scope of operations hypothesis has also been empirically supported by numerous authors. If outside directors bring valuable expertise and oversight to the board, then firms with disparate business lines and larger structures should benefit from larger and more independent boards. Boone et al. (2007) document such a finding - firms construct more independent and larger boards as they grow in size and complexity over time. Coles et al. (2008) find that diversified firms have more independent directors sitting on the board to monitor and advise the vast set of operations of the firm.[14] Knyazeva et al. (2009) and Anderson et al. (2011) extend these ideas and provide evidence that complex firms form more heterogeneous boards in terms of director expertise and

[13] See Raheja (2005) for similar predictions regarding the association between firm size and board size. The author argues that the trade-off between the extra monitoring ability of additional members and the free-riding (moral hazard) problems associated with additional members defines board size. As firms increase in size (or managerial private benefits), the benefits of additional monitoring outweigh the costs of free-riding, and hence large firms form large boards.

[14] See Denis and Sarin (1999), Lehn et al. (2005) and Linck et al. (2008) for further evidence validating the positive relation between board size and firm size.

director occupation.

With respect to this empirical investigation, the scope of operations hypothesis would imply a positive association between firm complexity and work allocation on the board. If firm complexity fosters a more rigid hierarchical firm form (Fama and Jensen (1983)), then it stands to reason that the same should apply to the form of the board. Large and diverse firms should tend to structure the monitoring and investment aspects of the board as distinct units, with the board spending more time in separate committees as compared to time spent making decisions as a full board. In other words, if large firms construct boards with more outside directors and greater levels of expertise heterogeneity, then such firms should be more inclined to partition the tasks of the board, and allocate a greater fraction of board work to be handled in committees. Consistent with the past literature, to proxy for firm complexity, I use firm size, firm age, and the number of business segments.

A second hypothesis in the boards literature is that the form of the board should reflect the costs of monitoring and the managerial private benefits present at the firm-level. This two-fold hypothesis is often denoted as the *monitoring hypothesis*. First, Adams and Ferreira (2007) model the structure of the board and suggest that the number of outsiders sitting on the board should decrease with the costs of monitoring. Extending this idea empirically, Coles et al. (2008) provide some evidence that since outside directors are ineffective at monitoring firms with high growth potential, the fraction of insiders on the board will be positively related to R&D expenditures. Linck et al. (2008) and Boone et al. (2007) make similar arguments that firms should create smaller and less independent boards the greater the level of asymmetric information between the firm and outside directors.

If inside director and CEO knowledge is an important feature to a well functioning board in high asymmetric information environments, then outside directors in such boards should stand to benefit from a discussion (transfer of knowledge) with inside directors before making their board-level decisions. Since outside directors must serve by themselves on the primary

monitoring committees in this post-SOX period, firms in high monitoring cost environments should be more inclined to pull the operations of the board away from monitoring committees (where inside directors have no say) and structure board operations so that oversight decisions are discussed at full board meetings. It follows that the monitoring hypothesis would predict that the fraction of board-time spent by outside directors in monitoring committees (removed from the full board) is negatively related to monitoring costs. Consistent with the prior literature, R&D intensity is used to proxy for the importance of firm-specific knowledge (monitoring costs).

In addition to the costs of monitoring, board composition should also be related to the level of managerial private benefits. This second facet of the monitoring hypothesis has been theoretically modeled by various authors (Raheja (2005); Adams and Ferreira (2007); Harris and Raviv (2008)). Simply, these authors demonstrate that as firm-level managerial private benefits increase a more independent board is optimally constructed to properly constrain the actions of management. In the context of this empirical investigation, managerial private benefits should be positively associated with monitoring work allocation to committees. If higher levels of board oversight are needed to constrain management as private benefits increase, then a greater fraction of the internal monitoring operations of the board should be handled outside the influence of the CEO. Following the existing literature on the issue of managerial private benefits, I implement two measures to proxy for private benefits: free cash flow and antitakeover provisions (E-Index).[15] In total, the monitoring hypothesis predicts that the fraction of board-time spent on the independent monitoring committees (apart from the full board) should be positively associated with managerial private benefits (free cash flow, antitakeover provisions) and negatively associated with information costs (R&D expenditures).

A third primary hypothesis in the boards literature is the *negotiation hypothesis*. The

[15]Jensen (1986) argues that free cash flow is associated with agency conflicts since management have strong incentives to waste it on pet projects instead of making investment decisions in the interests of shareholders. Hence, free cash flow serves as an appropriate measure of managerial private benefits. For evidence pertaining to the value destroying nature of takeover protection see Gompers et al. (2003) and Bebchuk et al. (2009).

predictions of this hypothesis generally follow from the idea that CEOs bargain with shareholders for certain board features that suit their interests. Hermalin and Weisbach (1998) formalize this hypothesis in a model where CEOs use their influence (via surplus production) to negotiate for insiders, or affiliated directors, to be placed on open board seats. The model suggests that as a CEO's bargaining position increases, board independence will fall. Support for this theory comes from a number of recent empirical investigations (Baker and Gompers (2003); Boone et al. (2007); Linck et al. (2008)).

If CEOs dislike the monitoring role played by outside directors and derive private benefits from control over the operations of board, then CEOs with considerable influence over the firm will mandate that the internal processes of the board be handled in their presence. As CEO bargaining power increases, it stands to reason that the monitoring and investment functions of the board will be controlled by the CEO and not by outside directors. Hence, the fraction of board work performed by outside directors removed from the CEO's presence (fraction of board-time spent in independent monitoring committees) will be negatively related to CEO bargaining power. Further, if CEOs desire to control dividend and capital structure decisions with minimal interference from outside directors, the negotiation hypothesis also predicts that the fraction of work handled by the CEO in the executive committee will be positively associated with CEO bargaining position. Consistent with the literature, to proxy for CEO influence I consider two primary measures: CEO ownership and CEO tenure.

D Dataset Construction and Variable Specification

The sample of firms used in the empirical analysis to test the three boards hypotheses is based on a set of post-SOX NYSE firms from 2005-2006. NYSE's 2003 listing requirement changes to mandate the complete independence of the primary monitoring committees (audit, compensation, nominating/governance) yields an environment where the construction of a 'clean' dataset to extend and test the hypotheses is feasible. To construct my sample of NYSE

firms, I start by accessing Compustat for the following firm-specific information: total assets, firm age, number of business segments, book leverage, R&D intensity (R&D/Sales), free cash flow (FCF), acquisitions, ROA, market-to-book (ratio of the market value to book value of assets).[16] In addition to information regarding firm characteristics, the CRSP monthly files are used to define all firm prices and returns. To ensure that outliers do not have an impact on the results, variables are winsorized at the 1% level.

To obtain information on firm-level institutional ownership and charter provisions, I access the Thomson Financial Institutional Ownership database and the IRRC database, respectively. In conjunction, these two databases serve to provide the necessary information needed to construct various proxies for the governance standards of the firm. First, the IRRC database provides annual data on firm-level provisions regarding staggered boards, poison pills and other charter/bylaws for approximately 1,500 firms, primarily from the S&P 500 and other large corporations. Bebchuk et al. (2009) construct a takeover defense index, the entrenchment index (E-Index), based on charter amendments, supermajority requirements, golden parachutes, poison pills, limits to shareholder bylaw amendments, and staggered boards. The E-Index used in subsequent sections, a proxy for firm-specific shareholder rights, follows from the authors' construction. Next, for information regarding institutional holdings at the firm-level, I access Form 13-F statements from the Thomson Financial Institutional Ownership database. This database provides the required information needed to construct a measure of aggregate institutional ownership (sum of shares held by all institutional investors).

Next, as a basis for the necessary board-level data, I use the Corporate Library for information on director characteristics and board membership. The Corporate Library provides data on board size, director affiliation, director tenure, director ownership, and committee

[16] Specifically, return on assets (ROA) is operating income before depreciation over assets. Market-to-book is the book value of assets minus book value of equity plus the market value of equity normalized by the book value of assets. Book leverage is the ratio of debt (long term total debt plus debt in current liabilities) to shareholders equity. Free cash flow (FCF) is income before extraordinary items plus depreciation and amortization less total dividends paid normalized by total assets.

structure. In particular, from this database, board independence is constructed as the fraction of non-employee directors on the board: the number of outside directors divided by the total number of directors, where affiliated outside directors are denoted as outsiders. While not in direct accordance with the NYSE definition of independence, this measure is consistent with the prior literature (Coles et al. (2008), Huson et al. (2001)). This measure of independence is also preferred to the alternative construct, where affiliated directors are treated as insiders, due to the fact that the definition of 'affiliated director' has changed over time (i.e. different specifications by the exchanges in 1999 and 2005). Moreover, the Corporate Library's categorization of affiliated director often does not match NYSE definitions. Hence, this treatment gives the cleanest and most consistent measure of board composition over time. Following this, for information pertaining to CEO characteristics, I access the ExecuComp database. ExecuComp provides CEO and officer data, including compensation, CEO age, CEO ownership, and CEO tenure.

To supplement the board-level data provided by the Corporate Library, I hand collect detailed board operations information from firm proxy statements (DEF 14A) over the 2005 to 2006 fiscal years (2006 to 2007 reporting years), available from the SEC's EDGAR reporting system. Should pertinent information be unavailable in these proxy statements, firm 10-K statements (annual reports) are used to provide supplemental information. To avoid complications with changes in board behavior which may have occurred following the financial crisis of 2007, the 2005 and 2006 fiscal years serve as the central time frame in this study.[17] To limit the size of the pre-collection dataset, I require that necessary firm-level data be available from Compustat (total assets, market-to-book), and that the firm be present in the IRRC (E-Index), Thomson (institutional ownership), Corporate Library (board membership), and ExecuComp (CEO ownership) databases. Since the empirical analysis requires previous year observations as controls, each firm must have available information for two consecutive years.

[17]Unobservable firm-level exposure to certain factors may have caused large shifts in the operations of the board after 2007, and for that reason a post-financial crisis time period is avoided in this study.

All regulated entities (utilities and financials) and firms that are not in compliance with the 2003 NYSE rulings (e.g. foreign private issuers, controlled companies, firms in bankruptcy and other passive organizations) are also removed from the dataset.[18] These necessary conditions result in 1,356 firm-year observations over the 2005 to 2006 period.

From firm proxy statements (DEF 14A), I record detailed information on each firm's committee structure - which standing committees exist within the board, the composition of each committee, and the number of meetings held by each committee in the fiscal year.[19] Consistent with Adams (2003), board committees are classified by their three primary functions: monitoring, investment (advising), and stakeholder interest. The three monitoring committees of foremost concern in this investigation are the compensation, nominating/governance, and audit committees. As mandated by NYSE's listing requirements, each firm has such a committee and discloses the operations of each of these monitoring committees in its proxy statements. Predominately, the operations of these monitoring committees are handled by outside directors apart from managerial input. The independent chairman of each committee sets the agenda for all meetings and reserves the right to call other officers of the firm to their committee meetings to assist with decisions, yet the language of the disclosure statements suggest that in general a vast majority of meetings are handled in isolation from inside director influence.[20] The one exception to this rule is the audit committee. The audit committee frequently meets with external auditors and the CFO of the firm to prepare and review financial statements. Considering the nominating and compensation committees, 20

[18]This treatment to remove firms that are not required to be in compliance with the rulings reduces the sample size by 5%. The inclusion of these firms does not alter subsequent results and in fact strengthens the results regarding the primary hypotheses.

[19]Schedule 14A of the Securities Exchange Act of 1934 requires firms to disclose the functions performed by their committees, the names of committee members, and the number of committee meetings during the last fiscal year. Anecdotal evidence suggests that board meetings held via teleconference are a fraction of the length of in-person board meetings (full meetings). Hence, such meetings are treated as half-meetings in this investigation. Results throughout hold in a qualitatively identical fashion whether teleconference meetings are treated as regular meetings (full meetings) or completely omitted.

[20]Further, a typical proxy 'Report of the Compensation Committee' or 'Report of the Nominating Committee' will state that non-management executive sessions were held following any committee meeting in which an executive was called to attend.

out of the 1,356 firm-year proxy statements explicitly note, or imply through the language of the document, that the CEO attended a majority of the meetings. The inclusion or exclusion of these observations has no material impact on results throughout the paper. Hence, the monitoring committee meeting in the post-SOX board represents an environment where not only does the CEO/insider have no voting stake, but the CEO/insider has also relinquished all control over decisions to the outside directors on the board (i.e. cannot dictate agenda/policies, and attends the meeting only if called there by an independent director).

The primary investment committee of greatest concern in this investigation is the executive committee. The executive committee operates in the board's stead when the full board is not in session and may make decisions on behalf of the board should the full board not be able to convene. The board may also delegate to the executive committee the authority to make certain policy decisions, limited by the articles of incorporation. Next, committees organized to represent the stakeholders' interests constitute the smallest fraction of committees in the sample. Committees dealing with public image issues (e.g. contributions, human resources, environment, diversity, corporate responsibility, public issues) are all classified as stakeholder committees.

Although small in total numbers, many firms have other miscellaneous committees operating within the board. Committees organized to deal with safety, retirement/pension, options, and succession are denoted as 'miscellaneous monitoring committees'. Committees dealing with technology, strategy, and acquisition issues are recorded as 'miscellaneous investment committees'.[21] The final committee not classified into any particular category is the finance committee. The finance committee may function as a monitoring committee, scrutinizing the capital structure decisions of the CEO, yet may also serve an advisory role to the executives of the firm (Klein (1998)). Given its dual functions, I do not allocate the finance committee to either the 'miscellaneous monitoring committee' group or the 'miscellaneous

[21] All together, miscellaneous monitoring committee meetings, miscellaneous investment committee meetings, and stakeholder meetings account for a small fraction of the total committee meetings in the sample (8%).

investment committee' group. Throughout the empirical analysis, allocation of this committee to either of the two groups does not alter results.

Following the assignment of committees, NYSE's 2003 listing rules also required boards to hold regularly scheduled outside executive sessions, where independent directors meet amongst themselves, separate from the CEO and any other current employee directors.[22] Since outside executive sessions constitute an NYSE mandate, and not a specific committee, the disclosure of the number of such meetings is not explicitly required. Nevertheless, firms often report the number of outside executive sessions in proxy statements. In fact, only 14% of sample firms make no mention of the issue, and 21% of firms state that they are in compliance with the NYSE listing requirements or that 'executive sessions of outside directors were regularly held'. In the data, firms appear to reveal the number of outside executive sessions held in a given fiscal year with a lower bound of one-quarter the level of full board meetings (e.g. 8 full board meetings and 2 outside executive sessions in a given year). In accordance with this finding, missing observations, or firm observations which simply state compliance with the NYSE outside executive session mandate, are recorded as having one-quarter the number of outside executive sessions as full board meetings. In later sections, I address robustness checks to this assumption.

For the second part of the empirical analysis in this paper, detailed information on committee and board operations is also needed from the pre-SOX period. Taking the original set of 2005 to 2006 firm-year observations, I create a matched sample to the year 1999 where inclusion is conditional on being present in the 2005-2006 dataset. I use the IRRC database to provide supplementary information for the 1999 set of firm observations. Identical committee and board operations variables are collected for this earlier set of data. This construction yields 586 firm observations with available board, ownership and financial data for the 1999 fiscal year.[23]

[22] See SEC Release No. 34-48745 (November 4, 2003) at http://www.sec.gov/rules/sro/34-48745.htm for more details on the issue.

[23] The loss of seventy observations follows generally from insufficient information (lack of coverage) in Compustat and ExecuComp for the 1999 sample.

E Specification of Primary Measures

Given the construction of the 1999 and 2005-2006 datasets, I now address the exact specification of the primary measures used in this study to proxy for the allocation of and control over internal board work. First, the fraction of board meetings handled by independent directors in a particular monitoring committee (Frac Monitoring) is constructed as the number of meetings held in the particular monitoring committee divided by the sum of full board meetings, executive committee meetings, and the number of meetings in the particular monitoring committee. This measure functions to capture the fraction of board monitoring work controlled by outside directors in the committee. The denominator includes the sum of full board meetings and executive committee meetings since executive committee meetings serve as a substitute to full meetings for the CEO (i.e. the CEO may call executive committee meetings in lieu of full board meetings). If the CEO was constrained by directors who would not allow executive committee meetings to take place, such meetings would otherwise be full board meetings. In essence, the denominator of the measure operates to proxy for the amount of work which the CEO controls (has a voting stake in), while the numerator operates to proxy for the amount of monitoring work which the independent directors control.

$$Frac\,Monitoring = \frac{Monitoring\,Committee\,Meetings}{Full\,Board\,Meetings + Monitoring\,Committee\,Meetings + Executive\,Committee\,Meetings}$$

Next, the fraction of board work handled in the executive (investment) committee is constructed in a similar manner: the number of meetings held in the executive (investment) committee divided by the sum of full board meetings and executive (investment) committee meetings. This measure, denoted as Frac Exec (Frac Exec/Inv), serves to proxy for the CEO's ability to control policy/investment decisions within the board (i.e. avoid the oversight of the full board and make decisions through the executive committee).

$$Frac\,Exec = \frac{Executive\,Committee\,Meetings}{Full\,Board\,Meetings\ +\ Executive\,Committee\,Meetings}$$

Moreover, it is critical to note that all forthcoming results associated with these measures are robust to alternative constructions. If the fraction of board meetings handled by a particular monitoring committee (Frac Monitoring) is altered to include the number of 'miscellaneous investment committee' meetings in which the CEO holds a position (in the denominator of the measure), the primary results detailed in this investigation hold in a qualitatively similar manner.[24] Similarly, if the fraction of board work handled in the executive committee (Frac Exec) is altered to exclude executive committee meetings from the denominator, the significance of the primary findings do not change. Additional alternative constructions to the primary measures are also detailed throughout the subsequent analysis.

It is also important to discuss the limitations of these measures before proceeding. First, each constructed measure includes only a 'count' of committee and full board meetings, and therefore the observed length of time spent in each meeting, and the effort intensity of each meeting is unobservable. The assumption throughout is that each meeting is equivalent to a unit of board-time and that across firms and within the board itself, such a measure of board-time captures a relatively consistent fraction of the work/effort devoted to a task. Next, though Frac Monitoring is constructed to capture the degree to which outside directors handle their monitoring operations in isolation from the CEO's influence, it is true that it is ultimately indeterminate the degree to which CEOs participate in committee meetings as non-voting members. Though the reports filed in firm proxy statements suggest that CEOs generally do not attend meetings, whether the CEO is physically present for some or many meetings is again inconclusive. Yet, as previously discussed, the monitoring committee still represents an environment where the CEO has relinquished ultimate voting control and procedural control to

[24] Since the percent of committee meetings held in 'miscellaneous investment committees' amounts to 2%, and the vast majority of these committees do not have the CEO as a voting member, such an alteration to the measure has no material impact.

the outside directors. With the central measures of board operational control well defined, I next address sample descriptive statistics.

F Summary Statistics

Table I provides summary statistics for the 1,356 firm-year observations over the 2005-2006 period. Panel A includes the mean, median, standard deviation, 25th percentile, and 75th percentile for various firm financial and governance measures. The mean (median) value of total assets is 10331 $MM (2733 $MM) in the sample. The average firm in this study is larger compared to firms in previous boards studies (Boone et al. (2007); Linck et al. (2008)), yet this follows as a natural consequence of the stringent sample requirements previously detailed. The governance summary statistics are also consistent with past studies. The mean (median) E-Index and institutional ownership for the sample firm is 2.44 (2) and 81% (84%), respectively. The mean (median) level of CEO ownership in the sample is 1.30% (0.26%), suggesting that a few CEOs hold considerable stakes in their firm, while most hold low levels of firm equity. In addition, the average CEO has held the executive position for 6.40 years. Mean director ownership (the average percent of shares held by outside directors, by firm) is about one-fifth the level of mean CEO ownership (0.21% v. 1.30%), and mean tenure levels are comparable between CEOs and outside directors (6.40 v. 6.98 years).

Panel B presents summary statistics for board, committee, and meeting structure. The median board size in the sample is 9 members, while the median level of independence (fraction of non-employee directors on the board) is 87.5%. Altering this definition and treating affiliated directors as inside directors decreases independence by approximately 8% for the sample. Given that the median firm in this sample has a board size of 9, this indicates that the most common board structure by 2005 is one in which the CEO serves as the single insider (employee director) on the board. Next, family boards are defined as boards where two or more individuals on the board are direct family members and one of the board members is an insider.

This construction includes father-son, brother-brother, husband-wife, sister-sister, etc., boards, but excludes boards where two or more cousins sit on the board. Family boards constitute 9% of the sample. Following this, the average audit, nominating, compensation, and executive committees have 3.96, 4.06, 3.85, 3.89 members, respectively. This is in accordance with the past empirical work of Hayes et al. (2004) who find that most committees have a median size of four directors.

Panel B also details the meeting structure of the board. The mean (median) number of full board meetings over this time period is 7.98 (7). This is nearly identical to the much earlier study of Vafeas (1999) who reports that the mean (median) number of full board meetings over the 1990 to 1994 time frame was 7.45 (7). The nominating and compensation committees meet an average of 3.81 and 5.46 times a year, respectively. Next, given the post-SOX increased scrutiny on firm financial statements, it is not surprising that the audit committee spends more time on their work alone (9 meetings a year) than the number of full board meetings (7 meetings a year). Combining the nominating, compensation, stakeholder, and miscellaneous monitoring committees (excluding the audit committee), the average firm holds 10 monitoring committee meetings a year. Adding the number of monitoring committee meetings (10.00) to the number of audit committee meetings (9.01) highlights that the 2005-2006 board holds over two times the number of meetings in outsider committees as compared to full board meetings (19.01 meetings per year v. 7.98 meetings per year). Hence, since the median director holds one committee position on the board (considering the four primary committees), this implies that the average 2005-2006 board operates in a highly fragmented manner. Outside directors spend a considerable fraction of their board-time interacting only with other members within committee, as compared to interacting with all board members in full board meetings.

Turning to the issue of the executive committee, 40% of firms have a standing executive committee in the sample. Yet, looking at the number of meetings held in the executive committee, it appears to be highly skewed. The 75th percentile of executive committee

meetings held is still 0, yet the mean is 0.66 meetings a year. In fact, only 19% of firms held one or more executive committee meetings in a given year. Though, these firms which do have executive committee meetings hold a significant number of meetings in the executive committee, with an average of over 3 meetings a year being held in the committee. Further, the CEO holds a position on the executive committee in 91% of the cases where an executive committee operates within the board. Situations where the CEO does not hold a position are almost exclusively firm-year observations where a CEO turnover event has occurred.

Following this, it is important to summarize the fraction of meetings held in various committees since these measures serve as central variables in this investigation. First, the mean (median) fraction of meetings in the audit committee, Frac Audit, is 0.51 (0.52). Given the small number of firms actually holding executive committee meetings, a similar statistic persists when altering the construction of Frac Audit to be the number of audit committee meetings normalized by the sum of the number of board meetings and audit committee meetings (mean of 0.53). Similarly, the mean fraction of meetings held in nominating, compensation, and monitoring (excluding audit) committees is 0.31, 0.39, and 0.53, respectively. In addition, the mean (median) fraction of outside executive sessions is 0.33 (0.31). The 25th and 75th percentile for this statistic are 0.20 and 0.50, respectively. On the lower end, this indicates that over 25% of firms are merely stating that they are in compliance with the NYSE's requirement regarding outside executive sessions. In fact, 35% of firms are simply stating compliance with the ruling (or not mentioning the issue in proxy statements). On the upper end, over 25% of firms are stating that the number of outside executive sessions matches the number of full board meetings. With the summary statistics delineated for the sample, I next turn to the empirical tests of the three board hypotheses.

III Empirical Design

In this section, I address the cross-sectional determinants of the operational form of the board and changes to the operational form of the board over time. First, I investigate how the three board hypotheses relate to the internal structure of board operations in a post-SOX environment. Following this, I detail how the operating structure of the board has changed over the pre- and post-SOX time frame. To conclude, I summarize how board compliance in the pre-SOX environment relates to operational changes.

A Cross-Sectional Determinants of the Operational Form of the Board

A.1 Univariate Analysis of Internal Monitoring Structure

Before explicitly testing the primary board hypotheses, I isolate one particular hypothesis, the negotiation hypothesis, and detail in a univariate sense how it is associated with the internal operations of the board. The negotiation hypothesis contends that the form which the board takes follows from a bargaining process between the CEO and outside directors representing the interests of shareholders (Hermalin and Weisbach (1998)).

Table II provides univariate support for the negotiation hypothesis. First, to mitigate the effect that CEO turnover may have on the operations of the board, 353 CEO turnover observations are removed from the table, leaving 1003 firm-year observations. Next, in the table, I consider three measures of CEO power: high tenure (10 or more years as the CEO), high ownership (greater than 1% ownership of the common shares outstanding), and family board (two or more family members sitting on the board).[25] Before detailing the differences between high and low power CEOs, consider the example of Maryjo Cohen, the CEO of National Presto Industries for over 10 years and the firm's largest blockholder. In fiscal year

[25] With the CEO turnover events removed from the sample, high tenure CEOs and high ownership CEOs both constitute one-third of the remaining sample.

2005, the firm's board met 6 times, the audit committee met 5 times, and the compensation and nominating committees met once. In addition, the firm made no mention of outside executive sessions. In essence, this serves as a prototypical example of how a high power CEO structures the oversight operations of the board. All nominating and compensation issues are discussed in the presence of the CEO and outside directors are in all likelihood meeting infrequently in outside executive sessions.

First, the difference in mean board size between high tenure (ownership) and low tenure (ownership) CEOs is -0.81 (-0.99). This difference in means (along with differences in medians according to the Wilcoxon signed-rank test) is significant at the 5% level for both measures of CEO power. Next, high tenure CEOs are associated with mean independence of 82%, while low tenure CEOs are associated with mean independence of 85%, a difference significant at the 5% level. Looking at the mean number of inside directors on each board (untabulated), high tenure CEOs are associated with 1.62 insiders on the board (including themselves) and low tenure CEOs are associated with 1.40 insiders on the board, a marginal difference.

Turning to the issue of board meetings, high power CEOs hold weakly fewer full board meetings (significant at the 5% level when considering CEO ownership and family board as the measures of CEO power). This is in accordance with the findings of Vafeas (1999) who demonstrates that high power CEOs hold fewer full board meetings. Yet, when allocating executive committee meetings to full board meetings, the difference between high and low power CEOs becomes statistically insignificant. High power CEOs also hold far fewer compensation and nominating committee meetings as well (significant across all measures of CEO power). Most importantly, Table II demonstrates that high power CEOs have a lower fraction of monitoring (compensation, nominating) meetings held outside of their presence on committees (Frac Comp, Frac Nom/Gov). Specifically, high power CEOs are associated with a lower fraction of meetings held in the compensation committee (significant at the 5% level when considering CEO tenure, yet not significant at this level when considering CEO

ownership or family board as measures of CEO power). A similar result persists for the fraction of meetings held in the nominating/governance committee (significant for all measures of CEO power).[26] Economically, the fraction of meetings handled by outside directors in the compensation (nominating) committees is 7% (17%) lower when considering high tenure CEOs as compared to low tenure CEOs. Table II also highlights that high power CEOs are also associated with fewer outside executive sessions. Across all measures of CEO power, the fraction of time spent by independent directors in outside executive sessions is considerably lower when high power CEOs sit on the board.

The final two columns of Table II detail the relationship between CEO power and the executive committee. The second to last column (Frac Exec) highlights that high tenure CEOs spend 33% more time in the executive committee as compared to low tenure CEOs (0.075 v. 0.050 fraction of meetings held in the executive committee). In addition to this measure of investment decision control, I also construct an indicator variable which takes a value of one if a board spends over 25% of their board meetings in the executive committee (Frac Exec $>$ 25%). 12.4% of high tenure CEOs spend this extreme amount of board time in the executive committee, while only 7.5% of low tenure CEOs spend this level of time in the executive committee (difference significant at the 5%). Results are less significant when considering family board as the measure of CEO power, but are significant at the 5% level when considering CEO ownership as the measure of CEO power. Further, the documented findings with respect to CEO power and board investment control are robust to alternative thresholds for Frac Exec (including Frac Exec $>$ 10%, and Frac Exec $>$ 30%). In addition, it is also important to note that results throughout Table II hold with the inclusion of CEO turnover events as well.

[26]The allocation of audit committee meetings is not detailed in this table due to the assumption that in the modern board auditing work is almost exclusively handled in committee. Further, it is difficult to reason that hypotheses such as the negotiation hypothesis should apply to audit committee work allocation. While CEOs may strive to have greater control over compensation issues or the election of directors, do high power CEOs really desire to control the evaluation of financial statements given the corporate scandals of 2000-2001 and the severe penalties now associated with financial misreporting? I operate under the assumption that auditing work will almost exclusively be dealt with in committee and thus should have no relation to the negotiation hypothesis.

Together, these findings provide supporting evidence pertaining to how high power CEOs control board-level policies. First, Adams et al. (2005) demonstrate that high power CEOs are associated with greater variability in firm performance. Since Table II shows that high power CEOs tend to call executive committee meetings in lieu of full board meetings, such a result identifies the mechanism by which this variability in firm performance manifests. Through the executive committee high power CEOs are able to enact quick and variable policy decisions, avoiding the mediating constraint offered by outside directors. Second, Core et al. (1999) show that CEOs who hold the board chair position demand higher cash-based and total compensation. Thus, since high power CEOs appear to pull the compensation/monitoring operations of the board away from committees and toward full board meetings (lower Frac Comp), this result again identifies just how high power CEOs bargain for the form in which their compensation is granted to them.

A.2 Determinants of Internal Monitoring Structure

While the univariate results presented in Table II lend support to the notion that high power CEOs generally control the internal monitoring processes of the board by having outside directors spend a greater fraction of their board-time in meetings in which the CEO has a voting stake, how do the other board hypotheses relate to the monitoring structure of the board? In Table III, I investigate this issue. A variety of monitoring control measures are regressed on firm-level determinants used to capture the three board hypotheses. In Columns (1) and (2) the dependent variable is Frac Comp (number of compensation committee meetings normalized by the sum of full board meetings, executive committee meetings, and compensation meetings). In Columns (3) and (4) the dependent variable is Frac Nom/Gov (fraction of meetings held in the nominating committee). In Columns (5) and (6) the dependent variable is Frac Mon (fraction of meetings held in all monitoring committees and stakeholder committees, excluding the audit committee). In Columns (7) and (8) the dependent variable is Frac Sessions (fraction of

meetings in outside executive sessions).

As discussed in previous sections, I use several firm-level controls to capture various aspects of the three board hypotheses. Firm size, segments, and firm age are implemented as proxies for firm complexity (the scope of operations hypothesis). Free cash flow (FCF) and E-Index are used to serve as proxies for firm private benefits and R&D is used to capture the costs of monitoring (monitoring hypothesis). To proxy for the level of CEO power, I focus on the two primary measures previously noted: CEO ownership and CEO tenure (negotiation hypothesis).[27] Finally, to control for other factors which may influence internal board operations, I include the following variables: CEO turnover (departure in the current or previous year), director turnover (departure in the current or previous year), market-to-book, mean outside director ownership, industry-adjusted returns over the prior year (adjusted by median returns in Fama-French 48 groupings), fraud/restatement (indicator of one if fraud or a restatement was announced in the prior year), and high acq (indicator of one if acquisitions normalized by market value were at the 75th percentile or higher in the previous year).[28] Firm-specific performance measures (industry-adjusted returns and market-to-book) are implemented as controls to serve as proxies for CEO ability, leaving the CEO power measures to capture the bargaining position of the CEO. In addition, all models include time and industry fixed effects to control for underlying economic factors (either in a given year, or specific to common market conditions) that may explain board operational structure. Standard errors are computed using robust methods (heteroskedasticity-consistent with clustering by firm) and p-values are denoted below coefficients in the table.

Columns (1) and (2) demonstrate a positive association between the fraction of meetings held in the compensation committee and the firm complexity variables (firm size, segments, and firm age), lending support to the scope of operations hypothesis. In particular, the

[27]The log transform of CEO tenure and the log transform of CEO ownership yield qualitatively similar results throughout the forthcoming tables. Such results are included as robustness checks in supplemental tables.

[28]Data on financial restatements are taken from the U.S. Government Accountability Office (GAO). Data for the revelation of fraud (charges brought against the firm regarding financial reporting violations) comes from a publicly available repository of Accounting and Auditing Enforcement Releases (AAERs) issued by the SEC.

coefficient on firm size is positive and significant at the 1% level in the first column.[29] Moreover, considering the coefficient on firm size, a shift from the 25th to the 75th percentile in firm total assets (within sample) implies a 5% increase in the fraction of meetings in the compensation committee. Next, in accordance with the monitoring hypothesis, free cash flow (FCF) is positively related to the fraction of meetings held in the compensation committee, and R&D is negatively related to the fraction of meetings in the committee, yet neither of the coefficients associated with these variables are significant. In addition, both CEO tenure and CEO ownership are weakly negatively related to the fraction of meetings in the compensation committee.

Columns (3) and (4) present the results where the dependent variable is the fraction of meetings held in the nominating committee. Similar associations persist throughout. Again, the positive and significant coefficient on firm size implies that a shift from the 25th to the 75th percentile in total assets yields a 6.5% increase in the fraction of time spent in the nominating committee. While CEO tenure and CEO ownership were weakly associated with the allocation of work to the compensation committee in Columns (1) and (2), in Columns (3) and (4) the coefficients on these two measures of CEO power are significant at the 1% level. Following this, in Columns (5) and (6) the dependent variable is the fraction of all monitoring meetings held in committees (excluding audit committee meetings, but including stakeholder and miscellaneous monitoring committee meetings). The coefficients associated with firm size and firm age are both positive and significant. A Wald test of the joint significance of the measures (all scope of operations measures) is significant at the 1% level. Hence, firm complexity is positively related to the allocation of monitoring tasks to committees. Next, the coefficients on CEO tenure and CEO ownership are again negative and significant at the 1% level.

[29]Note, this positive association between firm size and work allocation to committees holds despite an attenuation bias. Separating firm size, segments, and firm age into different unique models serves to increase statistical significant for all the variables, yet is omitted for brevity. Further, altering the dependent variable by removing executive committee meetings from the denominator yields qualitatively identical results pertaining to significance of these measures throughout the columns in Table III.

The dependent variable in Columns (7) and (8) is the fraction of time spent in outside executive sessions. As previously noted, in the collected proxy statement data, firms appear to report the actual number of outside executive sessions held in a given year with a lower bound of one-fourth the number of full board meetings. Given this, I have categorized those firms that do not report, or simply state compliance with the NYSE mandate, as holding one-fourth the number of outside executive sessions as full board meetings. This treatment creates a lower bound to the distribution of observations. An upper bound to the distribution also exists due to the fact that firms do not report holding more outside executive sessions than full board meetings. To control for this issue, a tobit regression is implemented in Columns (7) and (8).[30] While the conjectures associated with the three boards hypotheses primarily apply to the internal monitoring structure of the board (Columns (1) - (6)), it is also of interest to see how they relate to the fraction of time spent in outside executive sessions. Similar to previous results, firm size is positively related to the fraction of meetings held in outside executive sessions. In addition, the coefficient on R&D is positive and significant at the 1% level. While not directly in accordance with the monitoring hypothesis, this result is not entirely surprising. If high R&D corresponds to high levels of inside information, then this information which the CEO holds might also be associated with the ability to manipulate boardroom discussions. Hence, since the CEO may have a greater opportunity to guide board level proceedings and overstate future prospects, shareholders will demand that independent directors meet apart from the CEO after most full board meetings to discuss whether the CEO has in fact manipulated or falsified the performance outlook of the firm. In addition, both coefficients on the CEO power measures are negative and significant as well in these columns.

Also of interest is the fact that, in general, control variables in Table III appear to be insignificantly related to board monitoring structure. Turnover events (CEO or director) do not appear to significantly alter the meeting structure on the board. Firms with high levels of

[30] All results in Columns (7) and (8) are qualitatively identical if an OLS regression is implemented as the alternative to the tobit regression.

institutional ownership weakly structure the board so that a greater fraction of the meetings are handled by outside directors in committees. Fraud accusations, restatements, and acquisitions also seem to have little effect on the fraction of meetings held in monitoring committees. In addition, while Vafeas (1999) demonstrates a strong negative association between full board meetings held and performance (market-to-book), in this investigation the fraction of meetings in monitoring committees does not appear to change over market-to-book states. In other words, while the total number of meetings increases as firm performance falls, the number of meetings held in monitoring committees and the number of full board meetings scale together with firm performance.

In untabulated analysis, a variety of other methods are used to test the relationship between monitoring meeting structure and the board hypotheses. First, to augment the results presented in Columns (7) and (8), I construct two alternative measures to Frac Sessions: an indicator variable taking a value of one if the firm has an equal number of full board meetings as outside executive sessions, and an indicator variable taking a value of one if the firm does not state the number of outside executive sessions. Running logit models with these two alternative measures yields qualitatively similar results to those presented in Columns (7) and (8). In particular, firm size is still positively associated with the fraction of time spent in outside executive sessions, and the two measures of CEO power are both negatively associated with the fraction of time spent in outside executive sessions (all significant at equivalent levels to results presented in Table III). Second, for Columns (1) - (6), I define threshold levels of monitoring meeting allocation to committees using indicators at the 75th percentile for the sample. In essence, these measures proxy for situations where outside directors control monitoring decisions. Again, this specification does not alter the significance of the primary results presented in Columns (1) - (6). Third, I also consider a committee-member weighted measure to determine the fraction of meetings held in a particular committee. This amounts to scaling each number of committee meetings held by the number of committee members in the

particular committee and the number of full board meetings by the number of members on the board. Since the number of board members on each committee tends to move in accordance with board size (e.g. an 8 person board has 4 members on a committee and a 10 person board has 5 members on a committee), these alternative measures of board monitoring control function in nearly an identical fashion to the measures used in Table III. Results presented throughout hold in an equivalent manner if these measures are implemented.

With respect to the monitoring hypothesis, a variety of additional models are run to isolate the effect of managerial private benefits and monitoring costs on monitoring structure. In these models, the firm complexity proxies and CEO power measures are removed, leaving FCF, E-Index and R&D as the primary determinants. Equivalent weak supporting evidence for the monitoring hypothesis is found in such models. Also, in accordance with other past studies investigating the monitoring hypothesis, I use an alternative measure to capture firm-level asymmetric information: the standard deviation of returns over the prior year (Linck et al. (2008)). This measure of monitoring costs also yields qualitatively similar results to those presented using R&D intensity (i.e. nothing of significance). Finally, alternative models where board size and independence are implemented as control variables yield similar results throughout Table III, with the exception of the significance attached to the coefficient on firm size. Since the single greatest determinant of board size is firm size or firm complexity (Boone et al. (2007)), this correlation serves to diminish the significance associated with the variable. Yet, since independence and board size are not fundamental firm-level determinants of monitoring meeting structure on the board, and are in fact simultaneous choice variables which respond to similar controls used in this study, their use is omitted in the preceding table.[31]

In total, Table III demonstrates how the internal monitoring structure of the board relates to the three board hypotheses. The results offer strong support for the scope of operations hypothesis. Complex firms (large firms, older firms) are associated with a higher fraction of

[31] Though, for robustness the results are attached in Supplemental Table II.

meetings held in monitoring committees. Yet, Table III does not provide significant support for the monitoring hypothesis. The conjecture that free cash flow and antitakeover protection (E-Index) should be positively associated with monitoring task allocation, and that R&D expenditures should be negatively related to the fraction of time spent in independent committees does not appear to hold in any significant manner. Next, strong support is found for the negotiation hypothesis. CEOs that wield considerable power appear to structure the board so that the monitoring tasks are primarily done in their presence and not by outside directors in committees (lower fraction of meetings held in monitoring committees and lower fraction of meetings held in outside executive sessions).

A.3 Determinants of Investment/Policy Control

With the firm-level determinants of board monitoring control detailed, I now turn to the issue of board investment control. In this section, I extend and test two of the three board hypotheses. First, as previously discussed, if complex firms are associated with more hierarchical firm forms (Fama and Jensen (1983)), then the fraction of meetings allocated to investment committees should be positively associated with measures of complexity (scope of operations hypothesis). Next, if CEOs desire to control the investment decisions of the board, then CEOs who have a greater ability to affect the structure of their board's operations should spend a greater amount of time implementing decisions through the executive committee and possibly other investment committees.

To test these conjectures, I follow a similar empirical procedure to that of the methodology in the previous section. Table IV presents a series of regressions where the dependent variable is the fraction of meetings held in investment committees. In Columns (1) and (2) the dependent variable is the fraction of board meetings in the executive committee (number of executive committee meetings normalized by the sum of full board meetings and executive committee meetings). Since this measure is strongly skewed, for robustness I construct an

indicator variable which takes a value of one if the firm holds greater than 25% of its meetings in the executive committee. This measure is implemented as the dependent variable in Columns (3) and (4), and logit models are run to test its association with firm-level determinants.[32] Next, in Columns (5) - (8) I run a similar set of tests with the single addition of miscellaneous investment committee meetings to the dependent variable. Consequently, in Columns (5) and (6), the fraction of meetings held in the executive/investment committees is constructed as the sum of executive and miscellaneous investment committee meetings normalized by the sum of executive committee meetings, miscellaneous investment committee meetings, and full board meetings. A similar indicator variable to that used in Columns (3) and (4) follows in Columns (7) and (8). All columns also include previously constructed control variables. In addition, although the monitoring hypothesis is not associated with any definitive predictions in these models, I include FCF, E-Index, and R&D as firm-level controls in all models.

In Columns (1) and (2), the firm complexity variables (firm size, segments, and age) are all positively associated with the allocation of board meetings to the executive committee. In particular, the coefficient on firm size is positive and significant at the 5% level. Next, the coefficients on CEO tenure and CEO ownership are also positive and significant. Also of interest is the observation that, in general, control variables are insignificantly related to the fraction of meetings held in the executive committee. Though, higher levels of institutional ownership appears to be weakly associated with a lower fraction of board meetings handled in the executive committee. The results associated with the logit models in Columns (3) and (4) provide similar results. Again, the findings support the notion that high power CEOs are associated with greater control over investment decisions (higher fraction of meetings in the executive committee).

Next, in Columns (5) - (8), the dependent variable is altered to include miscellaneous investment committee meetings. First, firm size is positively related to the fraction of meetings in the investment/executive committees. Also, the coefficients on CEO tenure and CEO

[32]Note that in Columns (3) and (4) the *p*-values denoted at the bottom of the columns follow from tests of model significance (Model χ^2).

ownership are positive, though not at the same level of significance as the coefficients on these measures in Columns (1) - (4). This result highlights that CEOs of high power desire to make investment decisions for the full board through the executive committee, though are less likely to exercise control through alternative investment committees (e.g. strategy, acquisitions, etc.).[33] Further, results presented in Table IV are qualitatively similar if finance committee meetings are also included in 'miscellaneous investment committee meetings' and if alternative thresholds of work allocation are used in Columns (3), (4), (7), and (8).[34]

The results presented in Table IV again lend support to the scope of operations and negotiation hypotheses. Firm complexity (firm size) and CEO power indicators are both positively related to the fraction of meetings held in the executive committee. In particular, CEOs that have the ability to dictate the operational form of the board (high tenure, high ownership CEOs), appear to avoid the oversight provided by outside directors in full board meetings, and spend a greater fraction of time making policy decisions in the executive committee. The results highlight how powerful CEOs, despite being subject to outsider dominated boards, structure the internal investment operations of the board in their favor.

A.4 Changes in Performance Surrounding Abnormal Monitoring Meetings

To investigate whether or not excess meetings held in monitoring committees lead to a change in performance for the firm, in Table V I detail how control-firm adjusted performance measures change following a positive abnormal fraction of board-time spent in monitoring committees. In other words, if outside directors appear to spend a greater fraction of their time outside of the voting influence of the CEO (in monitoring committees) does this translate into

[33] This finding is not surprising if we consider the fact that CEOs hold such miscellaneous investment committee positions in only one-quarter of the cases. Further models constructed to properly remove these miscellaneous investment committee meetings in which the CEO does not hold a position on the committee from the numerator of the measure serves to increase the statistical significance on the CEO power measures (coefficients positive and significant at the 10% level).

[34] Alternative indicator variables for executive committee meeting structure are implemented in Supplemental Table III. Identical results hold throughout the table.

greater improvements in firm performance? Table V presents such changes in firm performance following an abnormally high fraction of meetings held in monitoring committees.

In particular, Table V presents changes in performance with respect to two different dimensions of abnormal monitoring meetings: the fraction of meetings held in all monitoring committees (Panel A), and the fraction of meetings held in all monitoring committees including outside executive sessions. Each measure of 'abnormal meetings' is constructed by regressing the measure on its determinants (Table III) and then taking the residual for each firm in 2005 (the 'zero' year). If the firm has a positive residual then it is considered to have abnormal monitoring meetings held in committee. Only the firms with positive residuals from the regression are included in Table V, which leaves 345 observations in the table. This is done to isolate the firms that appear to be spending a greater fraction of board time removed from the CEO's voting presence.

Next, from the 'zero date' (2005) I look at changes in firm performance. Performance changes are constructed as (1) changes in firm market-to-book minus changes in market-to-book for a control firm matched based on industry-adjusted market-to-book and size at t-1; (2) changes in firm ROA minus changes in ROA for a control firm matched based on industry-adjusted ROA and size at t-1; (3) changes in industry-adjusted market-to-book (where the industry benchmark is the median firm in the corresponding FF-48 classification); (4) changes in industry-adjusted ROA (where the industry benchmark is the median firm in the corresponding FF-48 classification). For the first two performance measures a control firm is necessary to calculate changes in performance. This control firm is selected by picking one firm which matches the sample firm in terms of being in the same size quintile and in the same in-industry performance quintile (MtB, ROA).

For both Panel A and Panel B, the average firm appears to be weakly, yet not significantly, doing worse and worse before 2005 in terms of market-to-book. Following the abnormal meetings held in monitoring committees, performance picks up slightly between 2005 and

2006, but again not significantly. Then, between 2006 and 2007 (year +1 to +2), market-to-book increases an average of 0.06 and a median positive shift of 0.13 (both significant at the 95%). These same positive changes in performance do not manifest when considering changes in ROA for firms with abnormal meetings held in monitoring committees. In total, Table V presents evidence that following an excess fraction of meetings held in monitoring committees (away from the CEO) performance improves for such firms when considering valuation measures.

B Changes in the Internal Operations of the Board Over Time

Over the past 60 years, the composition of the board of directors has changed in a significant manner. Hermalin and Weisbach (1988) highlight that outsider representation increased from 50% to 66% over the 1971 to 1983 time period for a sample of 142 NYSE firms. Lehn et al. (2005) study the evolution of 81 firms over time and note that independence increased from 50% in 1945 to 83% by 2000. In addition, Coles et al. (2008) highlight that the median fraction of insiders on the board had decreased to 20% over the 1990s. If the vast majority of boards were already 'outsider-dominated' by 1999, did the corporate scandals of 2000-2002 and the subsequent regulatory changes which followed have any material impact on CEO influence within the board? Further, if institutional investors did desire to push for greater board oversight how did it manifest given that the average board already exhibited such a high degree of 'nominal independence' (80% outsider representation)? In this section, I detail just how the board materially changed over this period.[35]

To investigate the issue, I take the original set of board observations from 2005 and match it to a sample of NYSE firms in 1999 with available board and proxy information, yielding

[35]While the purpose of this investigation is not to go into great detail concerning the issue of changes in directors characteristics on the board, consistent with past studies the primary change (between 1999 and 2005) in the type of director who served on the board was the reduction in the number of CEOs from other firms serving as directors, and the expansion of 'financial experts' serving as directors (Linck et al. (2009)).

586 firm observations. Table VI presents the differences between various board statistics over the 1999-2005 time period. Included in Panel A of Table VI are board size, independence, full board meetings (including executive committee meetings), fraction of meetings held in the compensation committee, fraction of meetings held in the nominating committee, fraction of meetings held in miscellaneous monitoring committees, fraction of time spent in the executive committee, work in executive committee (indicator of one if the fraction of meetings held in the executive committee is greater than 25%), and the fraction of firms holding one or more meetings in the executive committee (Meet in Exec).

In Panel A, I first detail differences over the time period using an unadjusted matched sample. Since NYSE firms in 1999 were not required to have independent monitoring committees, CEOs and insiders could sit on such committees. In fact, for this matched sample, 20% of firms in 1999 had an insider or the CEO sitting on the nominating committee. In addition, 34% of firms had no nominating committee in place. Hence, for 54% of firms in the sample the CEO or an insider had a voting stake in the board composition discussion. In addition, just over 5% of firms had an insider or the CEO sitting on the compensation committee. For this unadjusted matched sample, I simply treat such situations as though no insider was sitting on the monitoring committee.

The mean (median) board size in 2005 was 9.73 (9), while the mean (median) board size in 1999 was 9.75 (9). This amounts to an insignificant difference of 0.02 (0). Independence averaged 83.1% in 2005 and 79.0% in 1999. This yields a difference of 4.1% (significant at the 5% level). Altering the constructed definition of independence and treating affiliated directors as non-independent members yields a similar 6% increase in the measure over the time period.[36] While this difference is significant, the overall economic magnitude is still quite small. Since board size remained the same over the time period, the change in independence reflects the removal of less than one-half of one insider from the board and the addition of less than one-

[36]Further, using this altered definition of independence, 87% of firms had a majority of independent directors on the board in 1999. Using a much larger dataset, Duchin et al. (2010) show that 76% of firms had a majority of independent directors on the board in 2000, and the level of independence increased by 10% between 2000 and 2005. Linck et al. (2009) document a 7% increase in board independence over this time period.

half of one outsider to fill the position. For the unadjusted matched sample, the number of board meetings controlled by the CEO (full board meetings plus executive committee meetings) in 1999 was 8.54 and 8.59 in 2005. Next, although not directly noted in the table, the mean number of executive committee meetings held in 1999 was 1.20, far above the mean level of 0.67 in 2005.

Following this, for the unadjusted matched sample, the fraction of meetings held outside the CEO's voting influence in the monitoring committees increased significantly between 1999 and 2005. The mean (median) fraction of time spent in the compensation committee was 0.321 (0.333) for the 1999 sample and 0.390 (0.400) for the 2005 sample (differences significant at the 5% level). The mean (median) fraction of meetings held in the nominating committee was 0.134 (0.111) for the 1999 sample and 0.313 (0.333) for the 2005 sample. This amounts to a difference in means (medians) of 0.179 (0.222), significant at the 5% level. Similarly, the difference in means (medians) for the time spent in the audit committee is 0.219 (0.233), significant at the 5% level. In addition, the fraction of time spent in the executive committee was nearly cut in half between 1999 and 2005. In 1999 the mean fraction of meetings held in the executive committee was 0.093, and by 2005 it was 0.055. This constitutes a 40% drop in the measure between 1999 and 2005 (significant at the 5% level). A similar significant difference persists when considering boards which do over 25% of their board work in the executive committee (Work in Exec Committee).

To properly adjust for the presence of CEOs on committees in 1999, I create an adjusted matched sample. If the CEO sits on a particular monitoring committee (compensation, audit or nominating), any meetings that such a committee holds are now treated as 'full board meetings', or in other words, meetings which the CEO presides over. It is important to note that this adjustment is very conservative. Since, the CEO may exercise control over the committees in alternative manners in 1999 such as placing inside directors or affiliated directors to committee positions, this treatment is only isolating cases where the CEO definitely votes on

decisions. Yet, though constructed in a conservative manner, this adjusted match sample gives a more accurate representation of just how control over the monitoring decision-making processes changed over this time period. First, the mean number of meetings in which the CEO had a voting stake decreased from 9.10 to 8.59 between 1999 and 2005, significant at the 5% level.[37] Next, the mean number of meetings held by outside directors in the independent audit, compensation, and nominating committees increased from 3.48, 3.98, 1.11 to 9.15, 5.45, 3.82, respectively between 1999 and 2005 (all differences significant). Adding these monitoring committee meetings together, the CEO had a voting stake in more meetings (9.10) than meetings held by outside directors in independent committees (8.56) in 1999. In contrast, by 2005, the CEO had a voting stake in 8.59 meetings while outside directors held 18.42 meetings in the three primary independent monitoring committees.

Next, across all monitoring measures previously detailed, similar, yet slightly more significant results hold given the adjusted matched sample. The mean (median) difference in the fraction of meetings in the compensation committee over this time period is 0.088 (0.087). This amounts to a 30% increase in the time spent discussing compensation issues outside of meetings in which the CEO has a voting stake. Similarly, the average fraction of time spent in the nominating committee increased over 200% (mean difference of 0.213), and the average fraction of meetings in the audit committee increased 80% (mean difference of 0.231). The final three columns of the adjusted matched sample also provide supporting evidence pertaining to the decline in the CEO's ability to exercise control over board investment decisions through the executive committee. The fraction of the meetings held in the executive committee fell by 0.034 (38%) between 1999 and 2005. In addition, noted in the final column of the table, in 1999 31.8% of firms held at least one executive committee meeting, while in 2005 only 19.5% of firms held at least one executive committee meeting (a significant difference).

[37]Note, further adjusting this measure by weighting each board/committee meeting observation by the voting stake of the CEO in the particular meeting serves to increase the spread between meetings controlled in 1999 and 2005 (since by construct the CEO has greater voting power in any given committee meeting).

For robustness, in Panel B of Table VI I also examine a matched sample of firms where the percent difference in a given firm's market-to-book ratio over the period (between 1999 and 2005) is less than 40%. This matched sample is constructed to control for possible differences in meeting structure which may result purely from differences in firm performance states between 1999 and 2005.[38] This new market-to-book matched sample includes 391 observations. The results presented in Panel B follow in a qualitatively identical manner to those detailed in Panel A. For the new unadjusted matched sample, the average fraction of meetings in the compensation, nominating, and audit committees increased by 0.063, 0.178, 0.214, respectively, between 1999 and 2005 (all significant at the 5% level). In addition, the fraction of time spent in the executive committee decreased by 0.034 over this period (significant at the 5% level). Further robustness checks to partition the starting sample by firm size (at the median level of firm total assets in 1999), also yields equivalent changes in the meeting structure of the board over the time period - both small and large firms underwent this drastic shift in internal board operations.

Given the cross-sectional determinants of the operational form of the board presented in Tables II-IV, it is also important to detail how differences in firm characteristics over the time period cannot explain the documented changes in internal board control in Table VI. Table VII presents changes in CEO and firm attributes for the matched sample over the 1999-2005 period. First, the median market-to-book ratio for the matched sample weakly increased from 1.55 to 1.58 between 1999 and 2005, while median CEO tenure remained at 5 years over the time period.[39] In addition, the fraction of shares held by the CEO also did not change in a material fashion, with median ownership decreasing from 0.29% to 0.26% between 1999 and 2005. Firm size (total assets) did increase in a statistically significant manner over this period, with the average total assets amounting to 6798 ($MM) in 1999 and 9949 ($MM) in 2005. Yet, consider

[38] Though, as previously demonstrated in Table III, market-to-book appears to have no significant relation to monitoring work allocation.

[39] Average CEO tenure decreased from 6.79 years to 6.15 years between 1999 and 2005, while average market-to-book decreased from 2.02 to 1.84 over the period.

the actual economic impact that this 46% change in total assets would have on the fraction of meetings held in committees. Implementing the cross-sectional results in Table III, such a shift in total assets would imply an approximate 1% increase in the fraction of meetings in the compensation committee, and an approximate 1.2% increase in the fraction of time spent in the nominating committee (relative to median levels). These two implied changes are no where near the magnitude of the changes which took place between 1999 and 2005, and hence the increase in firm total assets may at best supplement the documented trends. Similar differences in CEO and firm characteristics persist across the market-to-book controlled sample.

In Panel B of Table VII I document changes in miscellaneous investment related features of the board. First, the mean fraction of meetings held in the finance committee weakly increased from 0.053 to 0.063, and the mean fraction of meetings held in miscellaneous investment committees weakly increased from 0.011 to 0.018 (insignificant). Though the fraction of board-time spent in these committees did not change in a material manner, the composition of both sets of committees did shift in a significant manner. Outsider representation on the finance committee, and miscellaneous investment committees increased 0.098 and 0.081, respectively. Thus, allocating such observations where the CEO holds positions on these committees to the number of meetings which the CEO has a voting stake in (sum of full board meetings, executive committee meetings, and meetings of miscellaneous investment/finance committees where the CEO holds a seat) serves to increase the difference in the measure to -0.60 (as compared to the -0.51 difference presented in Table VI).

In total, the matched sample results in Table VI provide evidence that not only did outside board members work more following the regulatory changes (Linck et al. (2009)), but more importantly, the internal operations of the board shifted in such a manner where CEO participation on the board was abated. In addition to the CEO presiding over fewer board meetings, the fraction of time spent by outside directors discussing monitoring issues removed from the influence of the CEO (outside of meetings in which the CEO has a voting stake) also

increased dramatically during this period.[40] Following this, the decrease in the fraction of meetings held in the executive committee lends further support to the notion that the CEO's ability to exercise control over investment decisions outside of the full board was significantly curtailed between 1999 and 2005.

To examine additional board time trends, in Table VIII I investigate whether firms which were non-compliant with NYSE rulings in 1999 were still associated with board differences by 2005. If the 2003 NYSE listing rulings only mandated the independence of monitoring committees, did non-compliant firms in 1999 simply shift operations so that outside directors spent less time in such committees by 2005? To test this, I partition my matched sample by NYSE compliance. First, 54% of firms in the sample were not in compliance with NYSE rulings regarding the structure of the nominating committee: 34% of firms did not have such a committee and 20% of firms had insiders serving on the committee in 1999. Taking this partitioned sample and looking at differences in board form between compliant and non-compliant firms in 2005 demonstrates that the two sub-samples were moderately different in terms of internal operations by 2005. Compliant firms had a mean (median) fraction of meetings held in the nominating committee of 0.323 (0.333). Non-compliant firms had a mean (median) fraction of meetings held in the nominating committee of 0.300 (0.300). This mean (median) difference of 0.023 (0.033) is significant at the 5% level.

Next, Table VIII also presents the results for compensation committee compliance. Just over 5% of firms in the matched sample were not in compliance with NYSE rulings regarding compensation committee independence in 1999. The resulting differences between the compliant and non-compliant firms are negligible. Table VIII serves to provide some evidence that non-compliant firms did not fully adjust to the intentions of the NYSE mandates.[41] In

[40]Further, while only 2% of firms reported having outside executive sessions in 1999, the average firm held 3.5 meetings in independent executive sessions in 2005.

[41]Though, it is clearly evident that non-compliant firms did change to the greater degree over this time period. Since non-compliant firms started with all monitoring meetings (nominating or compensation) being presided over by insiders and shifted to a level of 0.31 (Frac Nom), and 0.40 (Frac Comp), this does highlight that these firms underwent the greatest transformation in terms of board operational form.

particular, Table VIII demonstrates that although the NYSE rulings required the complete independence of nominating committees, non-compliant firms were still structured to have a greater fraction of the nominating work handled in the presence of the CEO by 2005.

IV Conclusion

This paper functions to extend our understanding of board control beyond independence. Using a hand-collected dataset of 586 NYSE firms, I provide supporting evidence that the primary change in the structure of the board between 1999 and 2005 was the reduction in the CEO's influence and control over the decision-making processes of the board. Over this time period, not only did the CEO have a voting stake in fewer board meetings, but more importantly, the fraction of meetings held by outside directors removed from the CEO's voting influence in the nominating, audit, and compensation committees increased 200, 80, and 30 percent, respectively. In addition, the fraction of board meetings held by the CEO in the executive committee decreased by 40%. Hence, while board independence increased 5% between 1999 and 2005, the empirical findings lend support to the idea that the principal governance reform following the corporate malfeasance scandals/regulatory events of 2000-2003 was through an alternative channel of 'independence' on the board - the internal control over board monitoring and investment operations.

Following this, to provide greater clarity on how the internal operations of the board are related to the bargaining position of the CEO and other firm-level determinants, I extend and test three primary hypotheses in the boards literature: the scope of operations hypothesis, the monitoring hypothesis, and the negotiation hypothesis. Consistent with past empirical work, I find strongest support for the scope of operations hypothesis and the negotiation hypothesis. First, complex firms (large and older firms) allocate a greater percentage of their monitoring and investment tasks to be performed in committees, outside of full board meetings. Next,

CEOs with considerable power over the operations of the board are associated with a lower fraction of meetings handled in independent monitoring committees (removed from the CEO). With respect to board investment decisions, high power CEOs are also associated with a greater fraction of meetings held in the executive committee. Together these results offer support for the idea that CEOs who have a greater ability to affect the structure of the board will pull the monitoring operations of the board away from independent committees (meetings which they cannot control), and will also pull the investment operations of the board toward the executive committee, thus avoiding the scrutiny of the full board as it pertains to policy decisions. Further, in conjunction, these two points suggest that the documented changes in board operational form between 1999 and 2005 were contrary to the preferences of CEOs.

The empirical results in this investigation lend new insight into a primarily unexplored area of board structure. In a post-SOX environment, where all boards are 'dominated' by outside directors and 87% independence is the norm, the findings presented here provide evidence that the internal operations of the board are an important structural feature to consider when discussing issues concerning board governance. In addition, the control over the internal decision-making processes may offer a more complete picture of 'independence' on the board.

Moreover, the results have strong implications for the validity of prior theoretical investigations into the determinants of board structure, as they apply to the modern board. For instance, the basis for our understanding of optimal board size follows from the argument that the trade-off between the extra monitoring ability (expertise) of additional outside directors and the free-riding (moral hazard) problems associated with additional members defines the size of the board (Raheja (2005); Harris and Raviv (2008)). Such a specification of the determinants of board size assumes that board members monitor the CEO in a full board meeting structure (i.e. where the CEO and *all* board members interact in a particular meeting). This presumption ignores the internal (endogenous) decision to allocate work to committees, which may foil or nullify any 'free-riding' explanation. While such a trade-off theory aptly applies to the board of

the 1960s-1990s, its use with regard to the determinants of the modern board may not be suitable. Given that the median NYSE board now holds over 18 meetings in individual monitoring committees and only 7 full board meetings in a given year, the assumption that each director continuously interacts with all other directors within the boardroom is no longer valid, especially for large/complex firms. Future theoretical research into the determinants of board structure cannot ignore the inherent option of work allocation on the board - to do so would only produce a theory of a board *meeting* and not a comprehensive theory of the modern board.

If the average NYSE board in 2005 operates in a highly fragmented manner, where the division of board tasks to committees is prevalent, this implies that board-wide empirical measures of director characteristics may no longer be appropriate for investigations into board policies and performance. If most board members now spend a significant fraction of their board-time interacting only with other members on a given committee, then board-level measures of director attributes (i.e. all inclusive measures of director differences, preferences and biases) will not accurately capture the interactions among board members which take place in the boardroom, and may yield faulty conclusions when used in empirical studies. Therefore, if most board work is now handled at the committee level, the structure and composition of distinct committees is as crucial a feature to understand as the structure of the overall board of directors.

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Table I: Summary Statistics

This table reports summary statistics for the sample of 1356 firm-year observations from 2005 and 2006. The firm policy descriptive statistics in Panel A include: assets ($MM), book leverage, R&D intensity (R&D/Sales), acquisition ratio (total value of acquisitions over market equity), free cash flow, business segments, firm age, ROA, and the ratio of the market value to book value of assets (market-to-book). The governance and compensation descriptive statistics in Panel A include: the Bebchuk, Cohen, and Ferrell (2009) entrenchment index (E-Index), institutional ownership (aggregate), block (top blockholder), CEO salary, CEO total compensation, CEO percent ownership, CEO equity compensation (equity compensation over total compensation), CEO tenure, CEO age, mean director ownership (mean holdings of independent directors by firm), and director tenure by firm. Panel B presents summary statistics for the sample board structure. The board descriptive statistics include: board size, the ratio of outsiders to board size (independence), the fraction of board members holding three or more board seats (fraction busy), the fraction of family boards, the size of various committees (audit, compensation, nominating/governance, executive), the independence of the executive committee, and the number of committee positions held per director. In addition, the summary statistics for the meeting structure of the board are also presented. These statistics include: the number of full board meetings, the number of committee meetings (audit, compensation, nominating/governance, executive, miscellaneous investment, outside executive sessions), the number of monitoring meetings (excluding audit, but including miscellaneous monitoring meetings and stakeholder meetings), and the fraction of meetings held in each committee.

Panel A: Firm Statistics	Mean	Std Dev	25th Percentile	Median	75th Percentile
Financial & Investment Policies					
Assets	10331.88	36763.02	1158.36	2733.50	7362.19
Book Leverage	0.346	0.226	0.191	0.333	0.475
R&D Intensity	0.021	0.041	0	0	0.022
Acq Ratio	0.036	0.094	0	0.002	0.025
Free Cash Flow	0.085	0.082	0.055	0.086	0.123
Segments	3.40	1.98	1	3	5
Firm Age	29.24	14.33	15	34	44
ROA	0.148	0.089	0.102	0.140	0.191
Market-to-Book	1.87	0.948	1.27	1.61	2.155
Governance & Compensation					
E-Index	2.44	1.16	2	2	3
Institutional Holdings	0.811	0.146	0.74	0.841	0.941
Block	0.104	0.044	0.074	0.097	0.126
CEO Salary	878.49	356.01	645	847	1026
CEO Total Comp	6747.89	7665.97	2366	4540.97	8494
CEO Equity Comp	0.451	0.252	0.287	0.489	0.646
CEO Ownership (%)	1.30	3.50	0.095	0.265	0.765
CEO Tenure	6.40	6.18	2	5	8
CEO Age	55.77	6.61	51	56	60
Mean Director Ownership	0.214	0.748	0.008	0.026	0.087
Director Tenure	6.98	3.82	4	6	9

Panel B: Board Statistics	Mean	Std Dev	25th Percentile	Median	75th Percentile
Board & Committee Structure					
Board Size	9.67	2.12	8	9	11
Independence	0.841	0.082	0.80	0.875	0.90
Fraction Busy	0.330	0.219	0.142	0.333	0.50
Family Board	0.096	0.290	0	0	0
Audit Committee Size	3.96	1.01	3	4	5
Nom/Gov Committee Size	4.06	1.44	3	4	5
Compensation Committee Size	3.85	1.09	3	4	4
Executive Committee Size	3.89	1.43	3	4	5
Executive Committee Indep	0.641	0.231	0.60	0.667	0.80
Committee Positions Held	1.46	0.836	1	1	2
Meeting Structure					
Full Board Meetings	7.98	3.46	6	7	9
Audit Committee Meetings	9.01	3.31	7	9	11
Nom/Gov Committee Meetings	3.81	1.81	3	4	5
Comp Committee Meetings	5.46	2.66	4	5	7
Monitoring Meetings	10.00	4.48	7	9	12
Executive Committee Meetings	0.66	1.96	0	0	0
Misc Inv Committee Meetings	0.24	1.14	0	0	0
Standing Executive Committee	0.398	0.49	0	0	1
Fraction Audit	0.514	0.108	0.440	0.526	0.601
Fraction Nom/Gov	0.310	0.113	0.235	0.315	0.40
Fraction Comp	0.389	0.110	0.311	0.400	0.465
Fraction Monitoring	0.531	0.117	0.461	0.542	0.616
Fraction Outside Exec Sessions	0.327	0.137	0.20	0.307	0.50

Table II: Operational Form and CEO Power

This table reports board structure statistics for the 2005-2006 sample, partitioned by various measures of CEO power. The three measures of CEO power are CEO tenure, CEO ownership and family boards. High CEO tenure denotes CEOs that have held the executive position for ten or more years. High Own denotes CEOs who hold greater than one percent of the common shares outstanding. Family board denotes boards where two or more family members sit on the board. In addition, 353 turnover event-years are excluded from the analysis (observations where the CEO departs in the current or prior year), leaving 1003 firm-year observations. The table presents differences for high and low CEO power across the following variables: board size, independence, full board meetings, compensation meetings, nominating/governance meetings, the fraction of meetings held in the compensation committee, the fraction of meetings held in the nominating/governance committee, outsider executive sessions, the fraction of meetings held in the executive committee, and work in exec (the fraction of firms who hold twenty-five percent of their board meetings in the executive committee). Differences in means (and medians in brackets) denoted in bold represent statistical significance at the 95% confidence level.

	Board Size	Indep	Board Meetings	Comp Meetings	Nom Meetings	Frac Comp	Frac Nom/Gov	Outside Sessions	Frac Exec	Work in Exec
High Tenure	9.14	0.820	7.54	4.81	3.09	0.366	0.275	0.301	0.075	0.124
	[9]	[0.857]	[7]	[4]	[3]	[0.375]	[0.285]	[0.250]	[0]	
Low Tenure	9.95	0.855	7.82	5.36	3.95	0.392	0.323	0.337	0.050	0.075
	[10]	[0.875]	[7]	[5]	[4]	[0.400]	[0.333]	[0.333]	[0]	
Difference	**-0.81**	**-0.035**	-0.28	**-0.55**	**-0.86**	**-0.026**	**-0.048**	**-0.036**	**0.025**	**0.049**
	[**-1**]	[-0.018]	[0]	[**-1**]	[**-1**]	[**-0.025**]	[**-0.048**]	[**-0.083**]	[0]	
High Own	8.97	0.814	7.31	4.72	3.08	0.373	0.282	0.295	0.073	0.118
	[9]	[0.857]	[6]	[4]	[3]	[0.384]	[0.294]	[0.200]	[0]	
Low Own	9.96	0.856	7.90	5.38	3.92	0.389	0.320	0.337	0.052	0.079
	[10]	[0.875]	[7]	[5]	[4]	[0.400]	[0.333]	[0.333]	[0]	
Difference	**-0.99**	**-0.042**	**-0.59**	**-0.66**	**-0.84**	-0.016	**-0.038**	**-0.042**	**0.021**	**0.039**
	[**-1**]	[-0.018]	[**-1**]	[**-1**]	[**-1**]	[-0.016]	[**-0.039**]	[**-0.133**]	[0]	
Family Firm	9.77	0.771	6.71	4.61	2.94	0.379	0.288	0.286	0.074	0.105
	[10]	[0.777]	[6]	[4]	[3]	[0.400]	[0.300]	[0.200]	[0]	
No Family Firm	9.72	0.857	7.89	5.29	3.81	0.386	0.314	0.332	0.054	0.085
	[9]	[0.875]	[7]	[5]	[4]	[0.400]	[0.316]	[0.333]	[0]	
Difference	0.05	**-0.086**	**-1.18**	**-0.68**	**-0.87**	-0.007	**-0.026**	**-0.046**	0.020	0.020
	[1]	[**-0.098**]	[**-1**]	[**-1**]	[**-1**]	[0]	[**-0.016**]	[**-0.133**]	[0]	

Table III: Determinants of Internal Monitoring Structure

The table reports results from regressing various measures of monitoring work allocation on firm-level determinants. The sample includes 1356 firm-year observations from 2005-2006. The following firm-level variables are implemented: firm size (log of total assets), segments (log of business segments), firm age, free cash flow, E-Index, institutional ownership (aggregate), R&D (indicator of one if R&D expenditures over sales is at the seventy-fifth percentile or higher), CEO tenure, CEO ownership, director ownership (average holdings of outside directors), market-to-book, CEO turnover (departure of the CEO in the current or previous year), director turnover, industry-adjusted returns over the prior year, fraud/restatement (indicator variable if there was an announcement of fraud or a restatement in the current or prior year), and high acq (indicator of one if acquisitions over market equity is at the seventy-fifth percentile or higher). The dependent variables presented are: the fraction of meetings held in the compensation committee, the fraction of meetings held in the nominating/governance committee, the fraction of meetings held in all monitoring committees (excluding the audit committee, but including miscellaneous monitoring committees and stakeholder meetings), and the fraction of time spent in outside executive sessions. All regressions are estimated via OLS, with the exception of outside executive sessions (Frac Sessions) which is estimated via tobit regressions. Industry (Fama-French 48 classification) and year fixed effects are included in all regressions. Standard errors are computed using robust methods (clustered by firm) and *p*-values are reported below coefficients in parentheses.

	Frac Comp (1)	Frac Comp (2)	Frac Nom/Gov (3)	Frac Nom/Gov (4)	Frac Mon (5)	Frac Mon (6)	Frac Sessions (7)	Frac Sessions (8)
Firm Size	0.0071	0.0069	0.0092	0.0091	0.0148	0.0142	0.0074	0.0074
	(0.01)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)	(0.07)	(0.08)
Segments	0.0021	0.0023	0.0051	0.0074	0.0033	0.0048	-0.0029	-0.0030
	(0.74)	(0.62)	(0.42)	(0.26)	(0.63)	(0.50)	(0.74)	(0.73)
Firm Age	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	-0.0001	-0.0001
	(0.16)	(0.15)	(0.08)	(0.10)	(0.03)	(0.03)	(0.81)	(0.85)
FCF	0.0461	0.0393	0.0319	0.0501	0.0284	0.0307	0.0502	0.0350
	(0.48)	(0.55)	(0.61)	(0.45)	(0.67)	(0.65)	(0.58)	(0.71)
E-Index	-0.0033	-0.0031	0.0019	0.0036	-0.0004	0.0005	-0.0019	0.0004
	(0.37)	(0.39)	(0.57)	(0.30)	(0.91)	(0.90)	(0.69)	(0.93)
R&D	-0.0009	-0.0009	0.0012	0.0032	0.0014	0.0019	0.0582	0.0653
	(0.94)	(0.93)	(0.91)	(0.79)	(0.90)	(0.87)	(0.00)	(0.00)
CEO Tenure	-0.0011		-0.0032		-0.0026		-0.0038	
	(0.15)		(0.00)		(0.00)		(0.00)	
CEO Own		-0.0041		-0.0085		-0.0089		-0.0070
		(0.08)		(0.00)		(0.00)		(0.01)
CEO Turnover	0.0057	0.0103	-0.0193	-0.0053	-0.0097	0.0010	-0.0315	-0.0107
	(0.50)	(0.20)	(0.05)	(0.46)	(0.28)	(0.90)	(0.03)	(0.35)
Director Turnover	-0.0038	-0.0041	0.0001	0.0025	-0.0038	-0.0023	0.0033	0.0085
	(0.54)	(0.51)	(0.97)	(0.69)	(0.56)	(0.71)	(0.75)	(0.41)
Director Own	-0.0021	-0.0012	0.0005	0.0011	-0.0026	-0.0017	0.0022	0.0017
	(0.59)	(0.74)	(0.88)	(0.76)	(0.56)	(0.65)	(0.72)	(0.78)
Inst Own	0.0254	0.0166	0.0333	0.0150	0.0349	0.0167	0.0740	0.0611
	(0.30)	(0.50)	(0.20)	(0.57)	(0.22)	(0.55)	(0.03)	(0.07)
Market-to-Book	0.0011	0.0013	0.0020	0.0001	0.0019	0.0009	-0.0019	-0.0024
	(0.80)	(0.76)	(0.59)	(0.96)	(0.67)	(0.83)	(0.79)	(0.72)
Ind Adj Ret	0.0075	0.0101	0.0209	0.0238	0.0172	0.0217	-0.0118	-0.0106
	(0.48)	(0.35)	(0.04)	(0.02)	(0.12)	(0.07)	(0.47)	(0.52)
Fraud/Restatement	0.0071	0.0081	0.0043	0.0063	0.0098	0.0115	-0.0092	-0.0067
	(0.50)	(0.44)	(0.65)	(0.51)	(0.35)	(0.27)	(0.51)	(0.62)
High Acq	0.0065	0.0076	-0.0031	-0.0032	0.0014	0.0018	0.0010	0.0015
	(0.39)	(0.30)	(0.67)	(0.66)	(0.84)	(0.81)	(0.93)	(0.91)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2	0.0692	0.0719	0.1339	0.1392	0.1201	0.1331	0.0786	0.0776

Table IV: Determinants of Internal Investment Control

The table reports results from regressing various measures of board/investment work allocation on firm-level determinants. The sample includes 1356 firm-year observations from 2005-2006. The following firm-level variables are implemented: firm size (log of total assets), segments (log of business segments), firm age, free cash flow, E-Index, institutional ownership (aggregate), R&D (indicator of one if R&D expenditures over sales is at the seventy-fifth percentile or higher), CEO tenure, CEO ownership, director ownership (average holdings of outside directors), market-to-book, CEO turnover (departure of the CEO in the current or previous year), director turnover, industry-adjusted returns over the prior year, fraud/restatement (indicator variable if there was an announcement of fraud or a restatement in the current or prior year), and high acq (indicator of one if acquisitions over market equity is at the seventy-fifth percentile or higher). The dependent variables presented are: the fraction of board meetings held by the CEO in executive committee outside of the full board (Frac Exec), an indicator variable of one if the CEO holds greater than twenty-five percent of board meetings in the executive committee (Work in Exec), the fraction of board meetings held in the executive and investment committees (Frac Inv/Exec), and an indicator variable of one if the board holds greater than twenty-five percent of board meetings in the executive/investment committees (Work in Inv/Exec). Regressions for Frac Exec and Frac Inv/Exec are implemented via OLS, and regressions for Work in Exec and Work in Inv/Exec are implemented via logit regressions. Industry (Fama-French 48 classification) and year fixed effects are included in all regressions. Standard errors are computed using robust methods and *p*-values are reported below coefficients in parentheses.

	Frac Exec (1)	Frac Exec (2)	Work in Exec (3)	Work in Exec (4)	Frac Inv/Exec (5)	Frac Inv/Exec (6)	Work in Inv/Exec (7)	Work in Inv/Exec (8)
Firm Size	0.0078	0.0092	0.1291	0.1457	0.0137	0.0148	0.2140	0.2245
	(0.04)	(0.02)	(0.10)	(0.07)	(0.00)	(0.00)	(0.00)	(0.00)
Segments	0.0002	0.0002	0.0365	0.0393	0.0022	0.0002	0.0950	0.0537
	(0.97)	(0.96)	(0.83)	(0.82)	(0.81)	(0.95)	(0.52)	(0.72)
Firm Age	0.0004	0.0004	0.0198	0.0186	0.0001	0.0001	0.0010	0.0008
	(0.25)	(0.33)	(0.04)	(0.04)	(0.91)	(0.98)	(0.88)	(0.91)
FCF	-0.0076	-0.0223	-1.8653	-2.0428	-0.0131	-0.0386	-1.2169	-1.8467
	(0.90)	(0.73)	(0.30)	(0.29)	(0.87)	(0.64)	(0.40)	(0.25)
E-Index	-0.0001	-0.0007	-0.0713	-0.0959	0.0009	0.0002	0.0274	0.0062
	(0.97)	(0.87)	(0.44)	(0.31)	(0.84)	(0.95)	(0.73)	(0.94)
R&D	-0.0057	-0.0046	0.2312	0.2782	0.0210	0.0201	0.7572	0.7632
	(0.59)	(0.66)	(0.57)	(0.49)	(0.17)	(0.18)	(0.02)	(0.02)
CEO Tenure	0.0020		0.0460		0.0018		0.0305	
	(0.03)		(0.01)		(0.08)		(0.07)	
CEO Own		0.0054		0.1105		0.0053		0.0632
		(0.07)		(0.02)		(0.12)		(0.12)
CEO Turnover	0.0104	0.0022	0.2108	0.0159	0.0023	-0.0058	-0.0512	-0.2367
	(0.30)	(0.81)	(0.43)	(0.94)	(0.83)	(0.57)	(0.82)	(0.28)
Director Turnover	-0.0007	-0.0004	-0.0174	-0.0259	-0.0028	-0.0018	-0.1201	-0.1188
	(0.91)	(0.94)	(0.93)	(0.90)	(0.73)	(0.82)	(0.49)	(0.50)
Director Own	0.0033	0.0033	0.1093	0.1133	0.0024	0.0026	0.0670	0.0720
	(0.53)	(0.52)	(0.27)	(0.26)	(0.67)	(0.64)	(0.50)	(0.47)
Inst Own	-0.0680	-0.0544	-0.5156	-0.1930	-0.0646	-0.0490	-0.3113	-0.1403
	(0.07)	(0.15)	(0.41)	(0.77)	(0.09)	(0.21)	(0.57)	(0.79)
Market-to-Book	-0.0019	-0.0006	-0.1873	-0.1285	0.0046	0.0058	0.1266	0.1603
	(0.67)	(0.88)	(0.27)	(0.45)	(0.45)	(0.33)	(0.24)	(0.15)
Ind Adj Ret	-0.0039	-0.0065	-0.2064	-0.2285	-0.0032	-0.0049	-0.1116	-0.1084
	(0.72)	(0.57)	(0.54)	(0.50)	(0.80)	(0.71)	(0.68)	(0.70)
Fraud/Restatement	-0.0039	-0.0036	-0.0473	-0.0691	0.0045	0.0052	0.1119	0.1277
	(0.74)	(0.76)	(0.86)	(0.80)	(0.75)	(0.72)	(0.63)	(0.58)
High Acq	-0.0047	-0.0030	-0.0778	-0.0379	-0.0017	-0.0003	-0.0819	-0.0289
	(0.59)	(0.73)	(0.76)	(0.88)	(0.86)	(0.97)	(0.70)	(0.89)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2/*p*-value	0.0828	0.0876	0.0001	0.0001	0.0820	0.0858	0.0001	0.0001

Table V: Changes in Performance Surrounding Abnormal Monitoring Meetings

This table reports changes in performance following abnormal monitoring meeting (fraction of meetings held in monitoring committees). Abnormal monitoring meetings are constructed across two dimensions: the fraction of meetings held in all monitoring committees (Panel A), and the fraction of meetings held in all monitoring committees including outside executive sessions (Panel B). Each measure is regressed on its determinants (Table III) and then the residual is extracted for each firm to capture abnormal monitoring meetings in 2005. Firms with negative residuals are excluded from the sample below, leaving a total of 345 firms with abnormal monitoring meetings. Year zero is the year of abnormal monitoring meetings (2005). Performance changes are defined as (1) changes in firm market-to-book minus changes in market-to-book for a control firm matched based on industry-adjusted market-to-book and size at *t*-1; (2) changes in firm ROA minus changes in ROA for a control firm matched based on industry-adjusted ROA and size at *t*-1; (3) changes in industry-adjusted market-to-book (where the industry benchmark is the median firm in the corresponding FF-48 classification); (4) changes in industry-adjusted ROA (where the industry benchmark is the median firm in the corresponding FF-48 classification). Each cell presents the mean change in performance, and in brackets below, the median change in performance. The Wilcoxon signed-rank test is used to assess if the median change in performance is different from zero. Changes in performance marked in bold represent statistical significance at the 95% confidence level.

Year	Control Firm-Adjusted Market-to-Book	Control Firm-Adjusted ROA	Industry Adjusted Market-to-Book	Industry Adjusted ROA
Panel A - the fraction of meetings held in all monitoring committees				
-2 to -1	-0.002	-0.000	-0.014	0.002
	[-0.010]	[0.001]	[-0.015]	[0.003]
-1 to 0	-0.009	0.001	-0.003	0.002
	[-0.008]	[0.001]	[-0.014]	[0.002]
0 to +1	0.012	0.001	0.026	0.001
	[0.031]	[0.002]	[0.032]	[0.003]
+1 to +2	**0.061**	0.000	**0.066**	-0.000
	[**0.130**]	[0.001]	[**0.141**]	[0.001]
-1 to +1	0.031	0.002	0.028	0.003
	[0.038]	[0.002]	[0.040]	[0.005]
-2 to +2	**0.071**	0.002	**0.085**	0.003
	[**0.107**]	[0.004]	[**0.115**]	[0.007]

Year	Control Firm-Adjusted Market-to-Book	Control Firm-Adjusted ROA	Industry Adjusted Market-to-Book	Industry Adjusted ROA
Panel B – Fraction of meetings held in all monitoring committees including outside executive sessions				
-2 to -1	0.009	0.001	-0.010	-0.001
	[-0.006]	[-0.001]	[-0.012]	[0.003]
-1 to 0	-0.015	0.000	-0.011	0.001
	[-0.016]	[-0.000]	[-0.011]	[0.002]
0 to +1	0.042	0.002	0.032	0.000
	[0.049]	[0.001]	[0.031]	[0.000]
+1 to +2	0.040	0.002	**0.052**	-0.001
	[**0.130**]	[0.003]	[**0.134**]	[0.001]
-1 to +1	0.023	0.001	0.019	0.000
	[0.012]	[0.002]	[0.000]	[0.000]
-2 to +2	**0.060**	0.004	**0.062**	-0.001
	[**0.103**]	[0.004]	[**0.112**]	[0.002]

Table VI: Changes in Board Structure Over Time

This table reports board structure statistics for a matched sample of firms. The sample comprises 586 firms from the original 2005-2006 data set which have available board and financial data for fiscal years 1999 and 2005. The full matched sample (unadjusted) includes all matched firms regardless of CEO or insider positions on monitoring committees. The unadjusted matched sample makes no alteration to firm-year observations where the CEO holds a committee position. In addition to the unadjusted full matched sample, the table also presents board structure statistics for an adjusted match sample. If a CEO holds a particular monitoring committee position and presides over meetings in a given year, then such committee meeting observations are treated as full board meeting observations. The variables presented below are the following: board size, independence, full board meetings (including executive committee meetings), the fraction of compensation committee meetings (Frac Comp), the fraction of nominating/governance committee meetings (Frac Nom/Gov), the fraction of audit committee meetings (Frac Audit), the fraction of miscellaneous monitoring meetings (including stakeholder committee meetings), the fraction of meetings in the executive committee (Frac Exec), Work in Exec Com (an indicator variable of one if the board holds greater than twenty-five percent of board meetings in the executive committee), and the fraction of firms which hold one or more executive committee meetings in a given year (Meet Exec Com). Board meetings include executive committee meetings. Panel B presents board structure statistics for a matched sample of firms where the percentage difference in a firm's market-to-book ratio over the period (between 1999 and 2005) is less than 40%. This controlled sample has 391 observations. Differences in means (and medians in brackets) denoted in bold represent statistical significance at the 95% confidence level.

Panel A: Matched Sample	Board Size	Indep	Board Meetings	Frac Comp	Frac Nom/Gov	Frac Audit	Frac Misc Monitoring	Frac Exec	Work in Exec Com	Meet Exec Com
Unadjusted Matched Sample										
2005 Sample	9.73	0.831	8.59	0.390	0.313	0.520	0.061	0.055	0.087	0.195
	[9]	[0.875]	[8]	[0.400]	[0.333]	[0.533]	[0]	[0]		
1999 Sample	9.75	0.790	8.54	0.321	0.134	0.301	0.046	0.093	0.143	0.318
	[9]	[0.818]	[8]	[0.333]	[0.111]	[0.300]	[0]	[0]		
Difference Btwn Periods	-0.02	**0.041**	0.05	**0.069**	**0.179**	**0.219**	0.015	**-0.038**	**-0.056**	**-0.123**
	[0]	[**0.057**]	[0]	[**0.067**]	[**0.222**]	[**0.233**]	[0]	[0]		
Adjusted Matched Sample										
2005 Sample	9.73	0.831	8.59	0.390	0.313	0.520	0.061	0.055	0.087	0.195
	[9]	[0.875]	[8]	[0.400]	[0.333]	[0.533]	[0]	[0]		
1999 Sample	9.75	0.790	9.10	0.302	0.100	0.289	0.045	0.089	0.141	0.318
	[9]	[0.818]	[8]	[0.313]	[0]	[0.286]	[0]	[0]		
Difference Btwn Periods	-0.02	**0.041**	**-0.51**	**0.088**	**0.213**	**0.231**	0.016	**-0.034**	**-0.054**	**-0.123**
	[0]	[**0.057**]	[0]	[**0.087**]	[**0.333**]	[**0.247**]	[0]	[0]		

Panel B: Market-to-Book Controlled Sample	Board Size	Indep	Board Meetings	Frac Comp	Frac Nom/Gov	Frac Audit	Frac Misc Monitoring	Frac Exec	Work in Exec Com	Meet Exec Com
Unadjusted Matched Sample										
2005 Sample	9.78	0.830	8.51	0.391	0.320	0.518	0.061	0.058	0.093	0.210
	[10]	[0.875]	[8]	[0.400]	[0.333]	[0.529]	[0]	[0]		
1999 Sample	9.76	0.794	8.33	0.328	0.142	0.304	0.045	0.092	0.148	0.331
	[10]	[0.818]	[8]	[0.333]	[0.125]	[0.300]	[0]	[0]		
Difference Btwn Periods	0.02	0.036	0.18	**0.063**	**0.178**	**0.214**	0.016	**-0.034**	**-0.055**	**-0.121**
	[0]	**[0.057]**	[0]	[**0.067**]	[**0.208**]	[**0.229**]	[0]	[0]		
Adjusted Matched Sample										
2005 Sample	9.78	0.830	8.51	0.391	0.320	0.518	0.061	0.058	0.093	0.210
	[10]	[0.875]	[8]	[0.400]	[0.333]	[0.529]	[0]	[0]		
1999 Sample	9.76	0.794	8.89	0.308	0.104	0.291	0.043	0.088	0.143	0.331
	[10]	[0.818]	[8]	[0.333]	[0]	[0.286]	[0]	[0]		
Difference Btwn Periods	0.02	0.036	-0.38	**0.083**	**0.216**	**0.227**	0.018	**-0.030**	**-0.050**	**-0.121**
	[0]	[**0.057**]	[0]	[**0.067**]	[**0.333**]	[**0.243**]	[0]	[0]		

Table VII: Changes in Firm, CEO and Board Characteristics

This table reports differences in firm, CEO and board statistics between 1999 and 2005 for a matched sample of firms. The sample comprises 586 firms from the original 2005-2006 data set which have available board and financial data for fiscal years 1999 and 2005. The variables presented below in Panel A for the full matched sample are the following: total assets, market-to-book, CEO tenure, and CEO ownership. Panel B presents changes in board structure statistics for the unadjusted matched sample which include: the fraction of meetings held in miscellaneous investment committees, the fraction of meetings held in the finance committee, miscellaneous investment committee independence, finance committee independence, and standing executive committee (the fraction of firms which have a standing executive committee). Differences in means (and medians in brackets) denoted in bold represent statistical significance at the 95% confidence level.

Panel A: Firm/CEO Characteristics	Assets	Market-to-Book	CEO Tenure	CEO Ownership
2005 Sample	9949.58	1.84	6.15	1.61
	[2650.41]	[1.58]	[5]	[0.258]
1999 Sample	6798.27	2.02	6.79	2.12
	[1628.27]	[1.55]	[5]	[0.291]
Difference Btwn Periods	**3151.31**	-0.18	-0.64	-0.51
	[**1022.14**]	[0.03]	[0]	[-0.033]

Panel B: Misc Committee Structure	Frac Misc Investment	Frac Finance	Misc Investment Independence	Finance Independence	Standing Exec
2005 Sample	0.018	0.063	0.762	0.791	0.402
	[0]	[0]	[0.75]	[0.80]	
1999 Sample	0.011	0.053	0.681	0.693	0.415
	[0]	[0]	[0.67]	[0.71]	
Difference Btwn Periods	0.007	0.010	**0.081**	**0.098**	-0.013
	[0]	[0]	[0.08]	[**0.09**]	

Table VIII: Compliant v. Non-Compliant Firms

This table reports board structure statistics for a matched sample of firms. The sample comprises 586 firms from the original data set which have available board and financial data for fiscal years 1999 and 2005. The statistics below detailed board structure for the sample in 2005 partitioned by the firm's compliance to the NYSE rulings in 1999. Comp Non-Compliance denotes firms where the CEO or an insider held a compensation committee position in 1999. Nom/Gov Non-Compliance denotes firms where the CEO or an insider held a nominating/governance committee position or such a committee did not exist in 1999. The variables presented below are the following: full board meetings (including executive committee meetings), the fraction of compensation committee meetings (Frac Comp), and the fraction of nominating/governance committee meetings (Frac Nom/Gov). In addition to the full matched sample, the table also presents board structure statistics for a matched sample of firms where the percent difference in a firm's market-to-book ratio over the period (between 1999 and 2005) is less than 40%. This controlled sample has 391 observations. Differences in bold represent statistical significance at the 95% confidence level.

	Comp Non-Compliance			Nom/Gov Non-Compliance		
	Board Meetings	Frac Comp	Frac Nom/Gov	Board Meetings	Frac Comp	Frac Nom/Gov
Matched Sample						
Compliant	8.55	0.390	0.313	8.54	0.390	0.323
	[8]	[0.400]	[0.333]	[8]	[0.400]	[0.333]
Not Compliant	9.70	0.381	0.301	8.65	0.389	0.300
	[9]	[0.400]	[0.301]	[8]	[0.400]	[0.300]
Difference	**-1.15**	0.009	0.012	-0.11	0.001	**0.023**
	[**-1**]	[0]	[0.022]	[0]	[0]	[**0.033**]
Market-to-Book Matched Sample						
Compliant	8.46	0.392	0.320	8.26	0.393	0.337
	[8]	[0.400]	[0.333]	[7]	[0.400]	[0.333]
Not Compliant	10.02	0.369	0.322	8.73	0.390	0.304
	[9]	[0.400]	[0.333]	[8]	[0.400]	[0.310]
Difference	**-1.56**	0.023	-0.002	-0.47	0.003	**0.033**
	[-1]	[0]	[0]	[-1]	[0]	[0.023]

Supplemental Table I: Determinants of Internal Monitoring Structure (Alternative Measures)

The table reports results from regressing various measures of monitoring work allocation on firm-level determinants. The sample includes 1356 firm-year observations from 2005-2006. The following firm-level variables are implemented: firm size (log of total assets), segments (log of business segments), firm age, free cash flow, E-Index, institutional ownership (aggregate), R&D (indicator of one if R&D expenditures over sales is at the seventy-fifth percentile or higher), log of CEO tenure, log of CEO ownership, director ownership (average holdings of outside directors), market-to-book, CEO turnover (departure of the CEO in the current or previous year), director turnover, industry-adjusted returns over the prior year, fraud/restatement (indicator variable if there was an announcement of fraud or a restatement in the current or prior year), and high acq (indicator of one if acquisitions over market equity is at the seventy-fifth percentile or higher). The dependent variables presented are: the fraction of meetings held in the compensation committee, the fraction of board meetings held in the nominating/governance committee, the fraction of board meetings held in all monitoring committees (excluding the audit committee, but including miscellaneous monitoring committees and stakeholder meetings), and the fraction of time spent in outside executive sessions. All regressions are estimated via OLS, with the exception of outside executive sessions (Frac Sessions) which is estimated via tobit regressions. Industry (Fama-French 48 classification) and year fixed effects are included in all regressions. Standard errors are computed using robust methods (clustered by firm) and *p*-values are reported below coefficients in parentheses.

	Frac Comp (1)	Frac Comp (2)	Frac Nom/Gov (3)	Frac Nom/Gov (4)	Frac Mon (5)	Frac Mon (6)	Frac Sessions (7)	Frac Sessions (8)
Firm Size	0.0073	0.0059	0.0096	0.0082	0.0160	0.0129	0.0072	0.0095
	(0.01)	(0.05)	(0.00)	(0.01)	(0.00)	(0.00)	(0.09)	(0.04)
Segments	0.0002	0.0019	0.0031	0.0071	0.0002	0.0047	-0.0021	-0.0060
	(0.98)	(0.77)	(0.62)	(0.28)	(0.97)	(0.51)	(0.81)	(0.51)
Firm Age	0.0004	0.0005	0.0005	0.0005	0.0006	0.0008	-0.0001	-0.0003
	(0.21)	(0.07)	(0.08)	(0.06)	(0.05)	(0.02)	(0.83)	(0.49)
FCF	0.0698	0.0205	0.0240	0.0343	0.0439	0.0093	0.090	0.0075
	(0.32)	(0.76)	(0.71)	(0.60)	(0.52)	(0.89)	(0.35)	(0.93)
E-Index	-0.0038	-0.0034	0.0022	0.0030	-0.0002	0.0001	-0.0011	-0.0001
	(0.31)	(0.34)	(0.54)	(0.40)	(0.95)	(0.96)	(0.81)	(0.99)
R&D	-0.0008	-0.0021	0.0038	0.0027	0.0039	0.0005	0.0535	0.0656
	(0.95)	(0.84)	(0.74)	(0.81)	(0.74)	(0.96)	(0.00)	(0.00)
Log(CEO Tenure)	-0.0050		-0.0017		-0.0131		-0.0030	
	(0.31)		(0.00)		(0.02)		(0.00)	
Log(CEO Own)		-0.0043		-0.0066		-0.0073		-0.0059
		(0.09)		(0.01)		(0.00)		(0.08)
CEO Turnover	0.0054	0.0088	-0.0314	-0.0063	-0.0165	-0.0006	-0.0498	-0.0113
	(0.62)	(0.28)	(0.01)	(0.42)	(0.16)	(0.94)	(0.01)	(0.37)
Director Turnover	-0.0011	-0.0042	0.0034	0.0034	-0.0002	-0.0022	0.0042	0.0107
	(0.85)	(0.50)	(0.61)	(0.60)	(0.97)	(0.73)	(0.70)	(0.31)
Director Own	-0.0019	-0.0004	0.0012	0.0009	-0.0025	-0.0012	0.0038	0.0019
	(0.63)	(0.91)	(0.76)	(0.79)	(0.56)	(0.74)	(0.54)	(0.75)
Inst Own	0.0176	0.0267	0.0273	0.0336	0.0285	0.0339	0.0770	0.0720
	(0.51)	(0.29)	(0.32)	(0.21)	(0.34)	(0.24)	(0.03)	(0.04)
Market-to-Book	0.0004	0.0014	0.0008	-0.0007	0.0007	0.0007	-0.0030	-0.0018
	(0.92)	(0.74)	(0.83)	(0.85)	(0.88)	(0.87)	(0.65)	(0.79)
Ind Adj Ret	0.0060	0.0077	0.0210	0.0214	0.0160	0.0189	-0.0058	-0.0098
	(0.59)	(0.49)	(0.04)	(0.03)	(0.16)	(0.10)	(0.73)	(0.56)
Fraud/Restatement	0.0074	0.0053	0.0071	0.0065	0.0114	0.0097	-0.0113	-0.0067
	(0.49)	(0.61)	(0.47)	(0.50)	(0.29)	(0.36)	(0.43)	(0.63)
High Acq	0.0082	0.0069	-0.0008	-0.0053	0.0043	0.0003	-0.0022	0.0011
	(0.30)	(0.35)	(0.91)	(0.49)	(0.59)	(0.96)	(0.86)	(0.93)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2	0.0687	0.0711	0.1279	0.1243	0.1167	0.1205	0.0797	0.0719

Supplemental Table II: Determinants of Internal Monitoring Structure (Additional Controls)

The table reports results from regressing various measures of monitoring work allocation on firm-level determinants. The sample includes 1356 firm-year observations from 2005-2006. The following firm-level variables are implemented: firm size (log of total assets), segments (log of business segments), firm age, free cash flow, E-Index, institutional ownership (aggregate), R&D (indicator of one if R&D expenditures over sales is at the seventy-fifth percentile or higher), CEO tenure, CEO ownership, director ownership (average holdings of outside directors), market-to-book, CEO turnover (departure of the CEO in the current or previous year), director turnover, industry-adjusted returns over the prior year, fraud/restatement (indicator variable if there was an announcement of fraud or a restatement in the current or prior year), high acq (indicator of one if acquisitions over market equity is at the seventy-fifth percentile or higher), board size, and board independence. The dependent variables presented are: the fraction of meetings held in the compensation committee, the fraction of board meetings held in the nominating/governance committee, the fraction of board meetings held in all monitoring committees (excluding the audit committee, but including miscellaneous monitoring committees and stakeholder meetings), and the fraction of time spent in outside executive sessions. All regressions are estimated via OLS, with the exception of outside executive sessions (Frac Sessions) which is estimated via tobit regressions. Industry (Fama-French 48 classification) and year fixed effects are included in all regressions. Standard errors are computed using robust methods (clustered by firm) and *p*-values are reported below coefficients in parentheses.

	Frac Comp (1)	Frac Comp (2)	Frac Nom/Gov (3)	Frac Nom/Gov (4)	Frac Mon (5)	Frac Mon (6)	Frac Sessions (7)	Frac Sessions (8)
Firm Size	0.0040	0.0038	0.0043	0.0037	0.0083	0.0075	0.0051	0.0046
	(0.24)	(0.28)	(0.19)	(0.26)	(0.02)	(0.04)	(0.27)	(0.32)
Segments	0.0008	0.0008	0.0027	0.0044	0.0002	0.0011	-0.0041	-0.0047
	(0.90)	(0.90)	(0.61)	(0.49)	(0.96)	(0.87)	(0.63)	(0.59)
Firm Age	0.0003	0.0003	0.0003	0.0003	0.0005	0.0004	-0.0001	-0.0001
	(0.28)	(0.26)	(0.22)	(0.31)	(0.13)	(0.15)	(0.82)	(0.79)
FCF	0.0414	0.0348	0.0261	0.0437	0.0204	0.0222	0.0494	0.0328
	(0.53)	(0.61)	(0.67)	(0.50)	(0.75)	(0.74)	(0.58)	(0.72)
E-Index	-0.0043	-0.0042	0.0002	0.0015	-0.0027	-0.0021	-0.0027	-0.0007
	(0.23)	(0.24)	(0.95)	(0.65)	(0.45)	(0.57)	(0.55)	(0.87)
R&D	-0.0001	-0.0012	0.0001	0.0022	0.0001	0.0006	0.0571	0.0642
	(0.99)	(0.91)	(0.99)	(0.84)	(0.99)	(0.95)	(0.00)	(0.00)
CEO Tenure	-0.0008		-0.0028		-0.0021		-0.0035	
	(0.23)		(0.00)		(0.01)		(0.00)	
CEO Own		-0.0040		-0.0070		-0.0069		-0.0060
		(0.10)		(0.00)		(0.00)		(0.02)
CEO Turnover	0.0073	0.0113	-0.0187	-0.0032	-0.0055	0.0037	-0.0292	-0.0093
	(0.41)	(0.16)	(0.06)	(0.67)	(0.53)	(0.65)	(0.04)	(0.43)
Director Turnover	-0.0019	-0.0025	0.0027	0.0051	0.0001	0.0010	0.0045	0.0098
	(0.76)	(0.69)	(0.67)	(0.42)	(0.98)	(0.87)	(0.66)	(0.35)
Director Own	-0.0024	-0.0016	0.0001	0.0004	-0.0032	-0.0026	0.0020	0.0014
	(0.55)	(0.68)	(0.97)	(0.91)	(0.46)	(0.52)	(0.74)	(0.81)
Inst Own	0.0309	0.0226	0.0409	0.0245	0.0452	0.0290	0.0765	0.0657
	(0.23)	(0.36)	(0.13)	(0.36)	(0.12)	(0.29)	(0.03)	(0.05)
Market-to-Book	0.0010	0.0013	0.0019	0.0001	0.0018	0.0009	-0.0019	-0.0024
	(0.81)	(0.76)	(0.60)	(0.97)	(0.68)	(0.83)	(0.77)	(0.72)
Ind Adj Ret	0.0071	0.0095	0.0201	0.0228	0.0161	0.0204	-0.0124	-0.0113
	(0.51)	(0.38)	(0.05)	(0.03)	(0.14)	(0.08)	(0.44)	(0.49)
Fraud/Restatement	0.0069	0.0077	0.0034	0.0052	0.0087	0.0102	-0.0102	-0.0077
	(0.50)	(0.46)	(0.72)	(0.59)	(0.40)	(0.32)	(0.46)	(0.57)
High Acq	0.0071	0.0084	-0.0018	-0.0017	0.0031	0.0038	0.0018	0.0024
	(0.34)	(0.26)	(0.80)	(0.81)	(0.68)	(0.61)	(0.87)	(0.84)
Board Size	0.0038	0.0039	0.0060	0.0066	0.0082	0.0085	0.0026	0.0032
	(0.11)	(0.09)	(0.01)	(0.01)	(0.00)	(0.00)	(0.40)	(0.29)
Independence	0.0312	0.0422	0.0894	0.1109	0.1152	0.1338	0.0771	0.0803
	(0.61)	(0.49)	(0.12)	(0.06)	(0.07)	(0.04)	(0.28)	(0.27)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2	0.0730	0.0794	0.1459	0.1539	0.1402	0.1523	0.0819	0.0815

Supplemental Table III: Determinants of Internal Investment Structure (Alternative Measures)

The table reports results from regressing various measures of investment work allocation on firm-level determinants. The sample includes 1356 firm-year observations from 2005-2006. The following firm-level variables are implemented: firm size (log of total assets), segments (log of business segments), firm age, free cash flow, E-Index, institutional ownership (aggregate), R&D (indicator of one if R&D expenditures over sales is at the seventy-fifth percentile or higher), director ownership (average holdings of outside directors), market-to-book, CEO turnover (departure of the CEO in the current or previous year), director turnover, industry-adjusted returns over the prior year, fraud/restatement (indicator variable if there was an announcement of fraud or a restatement in the current or prior year), and high acq (indicator of one if acquisitions over market equity is at the seventy-fifth percentile or higher). In columns 1-4 CEO tenure and CEO ownership are unadjusted, while in columns 5-8 indicator variables for high CEO tenure and high CEO ownership are implemented. The dependent variables presented are: an indicator variable of one if the firm holds at least one meeting in the executive committee in a given year (Meet in Exec), and an indicator variable of one if the CEO holds greater than ten percent of board meetings in the executive committee (Work in Exec). Industry (Fama-French 48 classification) and year fixed effects are included in all logit regressions. Standard errors are computed using robust methods and *p*-values are reported below coefficients in parentheses.

	Meet in Exec (1)	Meet in Exec (2)	Work in Exec (3)	Work in Exec (4)	Meet in Exec (5)	Meet in Exec (6)	Work in Exec (7)	Work in Exec (8)
Firm Size	0.1589	0.1891	0.1795	0.2184	0.1596	0.1658	0.1812	0.1907
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Segments	0.0485	-0.0178	-0.0224	-0.0478	0.0580	0.0558	0.0096	0.0136
	(0.69)	(0.88)	(0.86)	(0.71)	(0.63)	(0.64)	(0.94)	(0.91)
Firm Age	0.0079	0.0068	0.0072	0.0061	0.0075	0.0068	0.0068	0.0062
	(0.17)	(0.24)	(0.23)	(0.31)	(0.20)	(0.23)	(0.25)	(0.30)
FCF	0.4378	0.0996	0.2730	0.0048	0.4507	0.3763	0.3094	0.2400
	(0.75)	(0.94)	(0.84)	(0.99)	(0.74)	(0.78)	(0.82)	(0.86)
E-Index	0.1731	0.1619	0.1486	0.1385	0.1641	0.1665	0.1379	0.1390
	(0.03)	(0.04)	(0.05)	(0.07)	(0.03)	(0.03)	(0.06)	(0.06)
R&D	-0.3157	-0.2573	-0.2970	-0.2591	-0.3265	-0.3139	-0.3151	-0.2990
	(0.23)	(0.33)	(0.27)	(0.34)	(0.21)	(0.22)	(0.24)	(0.26)
CEO Tenure	0.0402		0.0421		0.4778		0.5434	
	(0.00)		(0.00)		(0.00)		(0.00)	
CEO Own		0.1023		0.1130		0.2883		0.3558
		(0.00)		(0.00)		(0.08)		(0.06)
CEO Turnover	0.2538	0.0299	0.2377	0.0173	0.0725	0.0250	0.0554	0.0052
	(0.17)	(0.86)	(0.21)	(0.92)	(0.66)	(0.88)	(0.75)	(0.97)
Director Turnover	0.1651	0.1733	0.0934	0.1356	0.1627	0.1539	0.0942	0.0888
	(0.26)	(0.24)	(0.54)	(0.37)	(0.27)	(0.30)	(0.53)	(0.55)
Director Own	-0.0295	-0.0267	-0.0070	-0.0093	-0.0322	-0.0238	-0.0113	-0.0008
	(0.73)	(0.76)	(0.93)	(0.92)	(0.71)	(0.78)	(0.89)	(0.99)
Inst Own	-1.0167	-0.8297	-1.2670	-1.0151	-1.0526	-0.9101	-1.3052	-1.1283
	(0.04)	(0.09)	(0.02)	(0.04)	(0.03)	(0.06)	(0.01)	(0.02)
Market-to-Book	0.0245	0.0182	-0.0646	-0.0590	0.0349	0.0475	-0.0521	-0.0373
	(0.79)	(0.86)	(0.54)	(0.60)	(0.71)	(0.61)	(0.61)	(0.72)
Ind Adj Ret	-0.1282	-0.1417	0.0940	0.0451	-0.1346	-0.1519	0.0857	0.0621
	(0.58)	(0.55)	(0.69)	(0.85)	(0.57)	(0.52)	(0.71)	(0.79)
Fraud/Restatement	0.0019	-0.0044	-0.0360	-0.0588	0.0076	-0.0103	-0.0283	-0.0472
	(0.99)	(0.98)	(0.85)	(0.77)	(0.97)	(0.96)	(0.88)	(0.81)
High Acq	-0.0347	-0.0281	-0.0405	-0.0122	-0.0404	-0.0439	-0.0452	-0.0439
	(0.84)	(0.87)	(0.82)	(0.94)	(0.81)	(0.80)	(0.80)	(0.81)
N	1356	1356	1356	1356	1356	1356	1356	1356
χ^2	107.37	106.36	101.07	104.95	109.20	103.58	101.10	96.36