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The Operational Form of the Board [1]

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ABSTRACT

The board of directors for the average firm underwent a significant transformation between 1999 and 2005 - not in terms of its size or the composition of its members, but in terms of the structure of its monitoring and investment operations. Over this time period, the operational form of the board shifted from a board structure where decisions regarding auditing, compensation, and the election of directors were made in the CEO's presence, to a board structure where the CEO had been primarily excluded from the decision making process of the board. The fraction of time spent by outside directors apart from the CEO's influence discussing nomination, audit, and compensation issues increased 200, 80, and 30 percent, respectively. Further, the CEO's ability to avoid the oversight of outside directors and control the policy/investment decisions of the board through the executive committee was roughly cut in half over this period. In addition to these time trends, I explore the cross-sectional variation in the operational form of the board by testing and extending several hypotheses in the boards literature. First, in accordance with the scope of operations hypothesis, the fraction of time spent working outside the full board in committees is positively associated with firm complexity. Second, lending support to the negotiation hypothesis, CEOs with considerable power structure the monitoring operations of the board so that decisions are implemented in their presence, and outside directors rarely meet in non-management executive sessions to discuss CEO performance issues. In addition, with regard to the investment decisions of the board, high power CEOs also spend less time convening the full board for approval on such issues and instead bypass the scrutiny of outside directors by implementing decisions through the executive committee. In total, the results extend our understanding of board structure by highlighting that the governance standards of the modern board are not only defined by the composition and size of the board, but also by its operational form.

I   Introduction

Over the second half of the twentieth century, the composition of the board of directors for the average U.S. firm changed in a substantial manner. Numerous authors document that over this 50-year period the fraction of the board comprised of outside directors roughly increased from 50% to 80%.[1] While many argue that this wave of board governance reform served to increase scrutiny on CEO performance, in what fashion did firms modify the structure of their boards given the corporate scandals of 2000-2001 and the comprehensive regulatory changes which followed?[2] If outside director representation was approaching 80%, and 40% of firms had the CEO sitting as the sole insider on the board in 1999, how did boards alter their structure to accommodate shareholder demands for better oversight if nearly all boards were already controlled by outside directors? In this empirical investigation, I document that the structure of the board underwent a significant transformation between 1999 and 2005 - not in terms of size or composition, but in terms of operational control over the monitoring and investment decisions of the board.

While board independence increased a marginal 5% between 1999 and 2005, the average firm saw the structural form of its board transition from one where the CEO was present for most board-level decisions, to a structural form where outside directors generally handled board decisions in independent committees, removed from the influence of the CEO. Over this time period, not only did the CEO preside over fewer meetings, but more importantly, the fraction of board work performed by outside directors in the audit, compensation, and nominating committees rose 80, 30, and 200 percent, respectively. In addition, the fraction of time spent by the CEO implementing policy decisions in the executive committee decreased by 40%. Together these results demonstrate that the CEO's control over board-level monitoring decisions, and the CEO's ability to bypass outside director oversight regarding investment decisions were significantly curtailed over this period of time. Hence, following the corporate malfeasance scandals of 2000-2001, shareholder demands for greater board scrutiny were primarily satisfied by a drastic shift in the operational form of the board.

In addition to documenting this transition in board monitoring control, I also investigate how the cross-sectional variation in the operational form of the board relates to a variety of hypotheses in the boards literature. Several authors have formulated and tested numerous theories pertaining to the relation 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. Yet, while board size and composition are important features to note when considering the effectiveness of a particular board's operations, a neglected feature of the modern board is

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[1]Lehn et al. (2005) study the evolution of 81 firms over time and note that independence increased from 50% to 83% during the latter half of the 20th century. Hermalin and Weisbach (1988) highlight that outsider representation increased from 50% to 66% between 1971 to 1983 for a sample of 142 NYSE firms. 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.

[2]Hermalin (2005) contends that the shift toward greater outside representation on the board may be associated with shorter tenures for CEOs, and greater levels of CEO effort. See Huson et al. (2001) for supporting evidence pertaining to CEO turnover and turnover-performance sensitivity from the 1970s to the 1990s.

the allocation of (and control over) monitoring/investment decisions on the board. Following the existing literature, I categorize the set of board theories into three distinct hypotheses: the *scope of operations hypothesis*, the *monitoring hypothesis*, and the *negotiation hypothesis*. I extend each of these hypotheses by examining how work allocation between committees and the full board (the fraction of board meetings handled outside of the full board in committees) relates to the bargaining position of the CEO, the cost of information for outside directors, and other firm-level factors.[3]

First, in accordance with the scope of operations hypothesis, I demonstrate that the fraction of board work performed in committees is positively related to firm size. This finding 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 monitoring work performed by outside directors in committees, and that managerial private benefits are positively associated with monitoring work allocation to 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)).[4]

Next, I examine how CEO influence affects the operational form of the board. If board structure follows from a negotiation process between the CEO and the outside directors of the firm (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 the negotiation hypothesis by detailing that high power CEOs (high ownership, high tenure) control board operations by forcing outside directors to perform their monitoring functions in the CEOs' presence. Further, CEOs with considerable influence also curtail outside discussion by structuring the board so that independent directors spend less time in non-management executive sessions.[5] Implicit in these results is the notion that CEOs derive private benefits from observing and presiding over the monitoring work of the board. Past research and anecdotal evidence on the inner-workings of boards lend support to the idea that CEOs may benefit from having directors discuss operational decisions at full board meetings and not in independent committees. Charles Elson notes that directors face significant pressure when speaking in front of management: 'In a boardroom, there is nothing more difficult to do than to talk about the CEO

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[3]Specifically, throughout the paper, the primary measure of the operational form of the board (work allocation between committees and the full board) is constructed as the number of meetings held in a particular committee divided by the sum of full board meetings, executive committee meetings, and the number of meetings for the particular committee.

[4]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.

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

while the CEO is present.'[6] Moreover, 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.[7] In conjunction, these findings establish how the preferences of CEOs relate to the operational form of the board - CEOs who have the ability to alter board structure will pull the monitoring operations of the board away from independent committees and back toward full board meetings where the scrutiny of outside directors can be abated.

Following the relation between CEO influence and the monitoring structure of the board, I also extend the negotiation hypothesis through an investigation into board-level control over policy decisions. While it may not be feasible to directly observe who on the board has final say over investment decisions, the executive committee functions as an environment where the CEO may implement capital structure changes, dividend policies, and other firm decisions with far fewer outside directors voicing opinions on such matters. In such, I observe that CEO bargaining power is positively associated with the fraction of board work handled in the executive committee. CEOs with the ability 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.[8]

Overall, the results presented here extend our understanding of board structure in two ways. First, the significant transformation in the operational form of the board between 1999 and 2005 highlights that the second wave of board governance reform to occur in the past 60 years was one in which CEOs were removed from the operational process of the board, diminishing their ability to influence and control board decisions. Second, the results pertaining to the cross-sectional determinants of work allocation on the board demonstrate that the operational form of the board is an important feature to consider when discussing issues related to board control and governance in the modern 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.

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

[7] See Sonnenfeld (2002) for further discussion and examples of conformity in the boardroom, and Agrawal and Chen (2010) for evidence on internal board disputes.

[8] 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.

II Background Information, Data, and Summary Statistics

In this section, I first describe how recent governance and listing requirement changes relate to this empirical investigation. Next, I highlight the existing work 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 World-Com corporate and accounting scandals, the Sarbanes-Oxley Act of 2002 (SOX) was enacted with the intention of being a comprehensive solution to the governance problems which brought about 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.[9] 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.[10] 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 (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.

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

[10] Similarly, for these companies, nominations must be approved either by a majority of the independent directors on the board or a nominating committee of independent directors.

Given NYSE's more definitive rulings regarding committee independence, the sample of firms implemented in the 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 outside 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: audit, executive, compensation, and nominating committee. 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 idea 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. Audit committees comprised of members with financial or corporate backgrounds are associated with firms that have smaller discretionary accruals. 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 allocation of work to committees 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.[11] What follows below is a conglomerate description taken from 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 monitoring 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 change by-laws or amend the firm's articles of incorporation.

C Development of Hypotheses

Past empirical and theoretical work 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 correspond to this investigation.

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

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[11]Hayes et al. (2004) provide a similar look at all the functions of committees in their sample. See the authors' work for a detailed look at the functions of less frequent committees (e.g. technology, pension plan, corporate responsibility).

served as a basis for investigations into the relation between firm complexity and board structure.[12]

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.[13] Knyazeva et al. (2009) and Anderson et al. (2009) extend these ideas and provide evidence that complex firms form more heterogeneous boards in terms of director expertise and director occupation.

Thus, 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 and less time 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. 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 board structure 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. Further, 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 members 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

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[12]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.

[13]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.

board away from committees (where inside directors have no say) and structure board operations so that monitoring decisions are discussed at full board meetings. In such, the monitoring hypothesis would predict that the fraction of work performed by outside directors in monitoring committees (apart 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 monitoring are needed to constrain management as private benefits increase, it follows that a greater fraction of the 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).[14] In total, the monitoring hypothesis predicts that the fraction of work performed by outside directors apart from the full board (on audit, compensation, and nominating committees) should be positively associated with managerial private benefits (free cash flow, takeover protection) and negatively associated with information costs (R&D expenditures).

A third primary hypothesis in the boards literature is the *negotiation hypothesis*. The 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.[15] 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 board, then CEOs with considerable firm influence will mandate that the operations 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 in committees. Hence, the fraction of monitoring work performed by outside directors removed from the CEO will be negatively related to CEO bargaining power, and the fraction of work that the CEO

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[14]Jensen (1986) argues that free cash flow is associated with agency conflicts since management has 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 Scharfstein (1988), Gompers et al. (2003), and Bebchuk et al. (2009).

[15]Other predictions of Hermalin and Weisbach (1998) are that more outsiders will be added to the board following poor performance, insiders are added to the board as the CEO reaches retirement, and that independence will decrease with CEO tenure. In addition, see Raheja (2005) for a different set of predictions regarding board composition and CEO influence.

performs in the executive committee should be positively associated with 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 implemented 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 1500 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 necessary 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 structure. 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.

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[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.

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.[17] 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.[18] 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. Further, since the empirical analysis requires previous year observations as controls, each firm must have available information for two consecutive years. All regulated entities (utilities and financials) and firms that are not in compliance with the 2003 NYSE rulings (foreign private issuers, controlled companies, firms in bankruptcy and other passive organizations) are also removed from the dataset. These necessary conditions result in 1,356 firm-year observations over the 2005 to 2006 period.

From firm proxy statements I record detailed information on each firm's committee structure - which standing committees exist within the board and the number of meetings held by each committee in the fiscal year.[19] In addition, I cross check the board-level information (board members and affiliation) provided by the Corporate Library and change any differences in accordance with the proxy statement information. 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. Outside directors reserve the right to call other officers of the firm to their committee meetings to assist with decisions, yet the language of the disclosure statements suggests 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 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

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[17]Firm 10-K statements (annual reports) are also used, should pertinent information be unavailable in DEF 14A statements.

[18]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.

[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 omitted.

[20]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. Moreover, the schedule of and items to be discussed during a committee meeting are always set by the independent chairman of the committee.

impact on results throughout the paper.

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. Following this, committees organized to represent the stakeholders' interests constitute the smallest fraction of committees in the sample. Committees dealing with public image issues (contributions, human resources, environment, diversity, corporate responsibility, public issues) are all classified as stakeholder committees.

Next, 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'. 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)).[21] Given its dual functions, I do not allocate the finance committee to either the 'miscellaneous monitoring committee' group or the 'miscellaneous 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 requirement changes also mandated 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 a NYSE mandate, and not a specific committee, the rules pertaining to 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 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 board meetings (e.g. 8 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 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

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[21] 19% of firms have a standing finance committee in the sample.

[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.

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 with the exception of information on outside executive sessions.[23] This construction yields 586 firm observations with available board and financial data for the 1999 fiscal year.

Given the construction of the 1999 and 2005-2006 datasets, it is important to note the exact specification of the primary measures used in this empirical study to capture the operational form of the board. First, the fraction of board work handled by 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). In essence, the denominator of the measure operates to capture the amount of monitoring work which the CEO controls, while the numerator operates to capture the amount of monitoring work which the independent directors control. Second, 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 serves to proxy for the CEO's ability to control policy/investment decisions within the board. With the central measures of board operational control well defined, I next address sample descriptive statistics.

E   Summary Statistics

Table I provides summary statistics for 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 average firm in the sample has free cash flow at 8.5% of total assets, book leverage of 35%, is 29 years old, and has an R&D intensity of 0.021. The mean (median) ROA and market-to-book of a firm in the sample is 0.148 (0.140) and 1.87 (1.61), respectively. 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

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[23]Since outside executive sessions were not required by the NYSE during this period, firms rarely report having such meetings (less than 2%).

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 for the sample is 9 members, while the median level of independence (fraction of non-employee directors on the board) is 87.5%.[24] 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 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 (exclusively this amounts to one of the family members holding the CEO position). 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. In addition, although not detailed in the table, the frequency of smaller committees ('miscellaneous monitoring committees', and 'miscellaneous investment committees') follows in a similar manner to Hayes et al. (2004), and Adams (2003).

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 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. Moreover, adding the number of monitoring committee meetings (10.00) to the number of audit committee meetings (9.01) highlights that the 2005-2006 board handles over two times the amount of monitoring work in outsider committees as compared to full board meetings (19.01 meetings per year v. 7.98 meetings per year). Hence, since the average director holds 1.41 committee positions on the board (untabulated), this implies that the average 2005-2006 board operates in a highly fragmented manner - where 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, 39% 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

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[24]Consistent with the prior literature, affiliated outside directors are denoted as outsiders (Coles et al. (2008), Huson et al. (2001)), and independence is constructed as the number of outsiders divided by the total number of directors. Altering this definition, and treating affiliated directors as inside directors decreases the median level of independence by approximately 0.1 for the sample.

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 hold executive committee meetings handle a significant amount of their board work in the executive committee, with an average of over 3 meetings a year being held in the committee.

Following this, it is important to summarize the fraction of board work performed by various committees, since these measures serve as central variables in this investigation. First, as previously detailed, the fraction of work performed by the audit committee (Frac Audit) is constructed as the number of audit committee meetings normalized by the sum of board meetings, audit committee meetings, and executive committee meetings. The mean (median) fraction of board work performed in the audit committee is 0.51 (0.52). Given the small number of firms actually holding executive committee meetings, a similar statistic persists when altering the definition 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 nominating, compensation, and monitoring (excluding audit) work performed in committee 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 is 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 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 structure of board operations in a post-SOX environment. Following this, I detail how the 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 Determinants of Monitoring Control

Before explicitly testing the primary board hypotheses, I isolate one particular hypothesis, the negotiation hypothesis, and provide univariate analysis regarding its effect on the operations of the board. The negotiation hypothesis argues that the form which the board takes follows from a bargaining process be-

tween the CEO and outside directors representing the interests of shareholders (Hermalin and Weisbach (1998)). Past empirical research has demonstrated that CEOs with considerable power use their position to bargain for more inside directors on the board (Boone et al. (2007); Linck et al. (2008)). In the context of this investigation, I conjecture that the power of the CEO also has a material impact on the operational form of the board. If the CEO dislikes the monitoring role of outside directors or desires to control overall board decisions, then a CEO will bargain to pull the operations of the board out of the hands of outside directors. This entails performing a greater fraction of the monitoring tasks in full board meetings and not in committees where outside directors discuss issues in isolation.

Table II provides univariate support for the negotiation hypothesis. First, to mitigate the effect that CEO turnover has on the operations of the board, 353 CEO turnover observations are removed from the table, leaving 1003 firm-year observations. Next, I consider three measures of CEO power: high tenure (10 years or more 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 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 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 Wilcoxon signed-ranks 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. Together these results indicate that CEOs in the modern board do not, or cannot, primarily control the operations of the board by appointing more inside directors to dilute board monitoring levels. Having an additional one-fifth of an insider on the board will not significantly help alter the control of the board if the other eight out of ten members are outside directors.

Turning to the issue of board meetings, high power CEOs hold weakly fewer board meetings (significant at the 5% level when considering CEO ownership and family board as the measures of CEO power).[26] High power CEOs will also hold far fewer compensation and nominating committee meetings as well (significant across all measures of CEO power). Most importantly, Table II demonstrates that

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[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.

[26]This is in accordance with the findings of Vafeas (1999) who demonstrates that high power CEOs hold fewer board meetings.

high power CEOs have a lower fraction of the monitoring (compensation, nominating) work performed outside of their presence on committees (Frac Comp, Frac Nom/Gov). High power CEOs are associated with a lower fraction of compensation work controlled by outside directors (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 nominating/governance work controlled by outside directors (significant for all measures of CEO power).[27] Economically, the fraction of compensation (nominating) work handled by outside directors apart from the CEO's control in committees is 7% (17%) lower when considering high tenure CEOs as compared to low tenure CEOs. Finally, 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.

Next, if CEOs desire to control the investment decisions of the board, it should follow that CEOs will implement policy decisions through the executive committee, side-stepping the oversight of the full board, if given the opportunity to do so. Since, by construct, CEOs have a greater voting stake in any decision implemented via the executive committee, this committee functions as an alternative to full board meetings, where CEOs may exercise investment decision control and implement decisions without full outside director approval. In the final two columns of Table II, I address this conjecture. High tenure CEOs spend 33% more time in the executive committee as compared to low tenure CEOs (0.075 v. 0.050 fraction of time spent 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 (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.[28]

Together, these findings demonstrate how high power CEOs control board-level policies. First, Adams et al. (2005) provide evidence that high power CEOs are associated with greater variability in firm performance. Thus, since 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

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[27]The allocation of audit committee work 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.

[28]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%).

that CEOs who hold the board chair position demand higher cash-based and total compensation. Hence, since high power CEOs pull the compensation/monitoring operations of the board away from committees and toward full board meetings, this again identifies just how high power CEOs bargain for the form in which their compensation is granted to them.

While the univariate results presented in Table II suggest that high power CEOs generally control the monitoring process by forcing outside directors to make their decisions in the CEO's presence, how do the other board hypotheses relate to the allocation of monitoring work? 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 board meetings, executive committee meetings, and compensation meetings). In Columns (3) and (4) the dependent variable is Frac Nom/Gov (fraction of work allocation to the nominating committee, constructed in the same manner as Frac Comp). In Columns (5) and (6) the dependent variable is Frac Mon (fraction of work allocation to all monitoring committees and stakeholder committees, excluding the audit committee). In Columns (7) and (8) the dependent variable is Frac Sessions (fraction of time spent 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 the scope of operations hypothesis. This hypothesis predicts a positive relation between work allocation to committees and firm size, segments, and firm age. Next, free cash flow (FCF), E-Index, and R&D are used to serve as proxies for firm private benefits (FCF, E-Index) and the costs of monitoring (R&D). The monitoring hypothesis predicts a positive association between private benefits and monitoring work allocation, and a negative association between the costs of monitoring and work allocation. To capture the level of CEO power, I implement indicators for high CEO ownership and high CEO tenure, as previously defined. The negotiation hypothesis predicts a negative relation between CEO power and work allocation to committees. Finally, to control for other factors which may influence work allocation between the monitoring committees and the full board, 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 if acquisitions normalized by market value were at the 75th percentile or higher in the previous year).[29] All models include time and industry fixed effects. Standard errors are computed using robust methods (clustered by firm) and *p*-values are denoted below coefficients in the table.

Columns (1) and (2) demonstrate a positive association between the fraction of work performed on 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 coefficient on firm size is positive

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[29]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.

and significant at the 1% level.[30] 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 time spent in the compensation committee. Next, in accordance with the monitoring hypothesis, free cash flow (FCF) is positively related to compensation work allocation, and R&D is negatively related to compensation work allocation, yet neither of the coefficients associated with these variables are significant.[31] In addition, both high CEO tenure and high CEO ownership are weakly related to lower work allocation to the compensation committee.

Columns (3) and (4) present the results where the dependent variable is the fraction of board work performed 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 high tenure and high ownership were weakly associated with work allocation 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. This indicates that CEOs of high tenure and high ownership are more likely to pull the nominating operations of the board away from outside director controlled committees and into full board meetings. Following this, in Columns (5) and (6) the dependent variable is the fraction of all monitoring work performed in committees (excluding audit committee meetings, but including stakeholder and miscellaneous monitoring committee meetings).[32] 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 work to committees. Next, the coefficients on high tenure and high ownership are again negative and significant at the 1% level.

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 board meetings. In such, 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 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 board

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[30]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 in these columns and through the rest of the columns in Table III.

[31]Also, in accordance with other past studies investigating the monitoring hypothesis, in untabulated results 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 (yet also nothing of significance).

[32]While stakeholder and miscellaneous monitoring committees are not required to have only outside directors holding positions, independence on these committees averages 82%. Due to the relatively few times these committees meet, the removal of stakeholder and miscellaneous monitoring committee meetings from this measure does not alter results.

meetings. To control for this issue, a tobit regression is implemented in Columns (7) and (8).[33] While the conjectures associated with the three boards hypotheses primarily apply to the allocation of monitoring work (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 time spent 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. Following this, both coefficients on the CEO power indicators are negative and significant as well. CEOs with greater control over the operations of the board do not let outside directors hold independent sessions removed from their presence.

Also of interest is the fact that, in general, control variables in Table III appear to be insignificantly related to monitoring work allocation to committees. CEO and director turnover events do not appear to significantly alter work allocation on the board. Firms with high levels of institutional ownership weakly structure the board so that a greater fraction of the monitoring work is handled by outside directors in committees. Fraud accusations, restatements, and acquisitions also seem to have little effect on the fraction of board work performed in monitoring committees. In addition, while Vafeas (1999) demonstrates a strong negative relation between board meetings held and performance (market-to-book), in this investigation the fraction of monitoring work performed by 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 over economic states.

In untabulated results, a variety of other methods are used to test the relation between monitoring work allocation 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 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 work allocation to committees using indicators at the 75th percentile for the sample. In essence, these measures proxy for

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

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 work performed in a particular committee. This amounts to scaling the numerator by the number of committee members and the denominator by the number of board members. 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 this measure is implemented.

In total, Table III demonstrates how control over the monitoring process 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 higher levels of work allocation to committees. Following this, 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 work 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. Yet, this is not startling given some of the inconclusive empirical results pertaining to this hypothesis in the prior literature (Boone et al. (2007); Linck et al. (2008)).[34] Next, strong support is found for the negotiation hypothesis. CEOs that wield considerable power structure the board so that the monitoring work is primarily done in their presence and not by outside directors in committees. In addition, high tenure and high ownership CEOs control the monitoring aspect of the board by not allowing independent directors to meet in outside executive sessions.

A.2   Determinants of Investment/Board 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 work 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 investment work performed in committee. In Columns (1) and (2) the dependent variable is the fraction

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[34]Boone et al. (2007) find that R&D is not negatively related to board independence (monitoring hypothesis) and is in fact positively associated with independence. Linck et al. (2008) find an insignificant association between board size and R&D.

of board work handled in the executive committee (number of executive committee meetings normalized by the sum of board meetings and executive committee meetings). Since this measure is strongly skewed, I construct an indicator variable for robustness which takes a value of one if the firm holds greater than 25% of its board meetings in the executive committee. This measure is implemented as the dependent variable in Columns (3) and (4), and logit regressions are run to test its relation to firm-level determinants.[35] 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 work performed 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 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 this model, 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 work to the executive committee. In particular, the coefficient on firm size is positive and significant at the 5% level. Next, the coefficients on high CEO tenure and high CEO ownership are also positive and significant. This indicates that high power CEOs are associated with greater work allocation to the executive committee. Also of interest is the observation that, in general, control variables are insignificantly related to investment work allocation. Though, higher levels of institutional ownership appears to be weakly associated with a lower fraction of board work handled by the executive committee. The results associated with the probit models in Columns (3) and (4) provide similar results. Again, high power CEOs are associated with greater control over investment decisions (higher fraction of work performed on 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 work performed on the investment/executive committees. Next, the coefficients on high CEO tenure and high CEO ownership are positive, though no longer significant. This result, in conjunction with the results presented in Columns (1) - (4), demonstrate that CEOs of high power desire to make investment decisions for the full board through the executive committee, though are no more likely to use other investment related committees (strategy, acquisitions, etc.) to exercise control. 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).

The results presented in Table IV again lend support to the scope of operations and negotiation hypotheses. Firm complexity (firm size) and CEO power are both positively related to the fraction of work handled by the executive committee. In particular, CEOs that have the ability to dictate the operational form of the board (high tenure, high ownership CEOs), side-step the oversight provided by outside direc-

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[35]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)

tors in board meetings, and implement policy decisions in the executive committee. The results highlight how powerful CEOs, despite being subject to outsider dominated boards, structure the investment operations of the board in their favor.

B   Changes in the Operational Form of the Board

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.[36] Yet, if the median NYSE board already had 80% outsider representation by 1999, what did shareholders really demand in terms of board structural changes given the corporate scandals of 2000-2001? If nearly all NYSE firms had outsider dominated boards, and many had the CEO serving as the single insider on the board, then how did institutional investors push for greater board oversight between 1999 and 2005? In this section, I detail just how the board materially changed over this period.

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. This matched sample has 586 firm observations. I then collect detailed information on board operations for this 1999 sample. Table V presents the differences between various board statistics over the 1999-2005 time period. Included in Panel A of Table V are board size, independence, board meetings (including executive committee meetings), fraction of work done on the compensation committee, fraction of work done on the nominating committee, fraction of work done in miscellaneous monitoring committees, fraction of work handled by the executive committee, and work in executive committee (indicator of one if the fraction of work done in the executive committee is greater than 25%).

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, 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.[37] This yields a difference of 4.1% (significant at the 5% level). While this

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[36]In addition, Coles et al. (2008) show that the median fraction of insiders on the board had decreased to 20% over the 1990s.

[37]In addition, 40% of firms in 1999 had the CEO serving as the sole insider on the board.

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-half of one outsider to fill the position. For the unadjusted matched sample, the number of board meetings controlled by the CEO (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 (median) number of audit, compensation, and nominating committee meetings in 1999 was 3.50 (3), 4.05 (4), and 1.45 (1), respectively. All these statistics are significantly lower than corresponding statistics in the 2005 sample. The mean number of executive committee meetings held in 1999 was 1.20, far above the mean level of 0.66 in 2005.

Following this, for the unadjusted matched sample, the fraction of monitoring work performed outside the CEO's influence 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 time spent 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 work performed by the executive committee was nearly cut in half between 1999 and 2005. In 1999 the mean fraction of time spent in the executive committee was 0.093, and by 2005 it was 0.055. This constitutes a 40% drop in the work done in the executive committee 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 or nominating), any meetings that such a committee holds are now treated as full board meetings. This adjusted match sample gives a more accurate representation of just how control over the monitoring process changed over this time period. Across all monitoring measures previously detailed, similar, yet slightly more significant results hold given the adjusted matched sample. First, the average number of board meetings which the CEO controlled (or had a voting stake in) fell from 9.10 in 1999 to 8.59 in 2005, significant at the 5% level. Next, the mean (median) difference in the fraction of work handled by 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 the CEO's presence. Similarly, the average time spent discussing nominating issues outside the influence of the CEO increased over 200% (mean difference of 0.213), and the average fraction of work performed by the audit committee increased 80% (mean difference of 0.231). The final two columns of the adjusted matched sample also provide supporting evidence pertaining to the decline in the CEO's ability to exercise control over the investment decision through the executive committee. The fraction of the work performed in the executive committee fell by 0.034 (38%) between 1999 and 2005. In addition, although not presented in the table, in 1999 32% of firms held at least one executive

committee meeting, while in 2005 only 20% of firms held at least one executive committee meeting.

For robustness, in Panel B of Table V 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 work allocation 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 work allocated to 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 work performed by the executive committee decreased by 0.034 over this time period (significant at the 5% level).

Moreover, given the cross-sectional determinants of work allocation presented in Tables II-IV, it is also important to detail how differences in firm characteristics over the 1999-2005 period cannot explain the results documented in Table V. First, the median market-to-book ratio for the matched sample weakly increased from 1.55 to 1.58 between 1999 and 2005, while the 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 the actual economic impact that this 46% change in total assets would have on the fraction of work handled 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 work performed in the compensation committee, and an approximate 1.2% increase in the fraction of work performed 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.

In total, the matched sample results in Table V demonstrate that not only did outside board members work more (Linck et al. (2009)), but more importantly, the operational control of the board shifted in their favor. In addition to CEOs presiding over fewer board meetings, the fraction of time spent by outside directors discussing monitoring issues removed from the influence of the CEO also increased dramatically during this period. Following this, the CEO's ability to exercise control over investment decisions through the executive committee was approximately cut in half between 1999 and 2005.

To further examine board time trends, in Table VI 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 rulings only mandated the independence of monitoring committees, did non-compliant firms in

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[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 6.89 years to 6.18 years between 1999 and 2005 (insignificant), while average market-to-book decreased from 2.08 to 1.85 over the period.

1999 simply shift operations so that outside directors spent less time in such committees by 2005? To test this idea, 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. 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 operational form by 2005. Compliant firms had a mean (median) fraction of work allocated to the nominating committee of 0.323 (0.333). Non-compliant firms had a mean (median) fraction of work allocated to 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 VI also presents the results for compensation committee compliance. Only 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 VI serves to provide some evidence that non-compliant firms did not fully adjust to the intentions of the NYSE mandates. In particular, Table VI provides evidence 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 at the board level (in the presence of the CEO) in 2005.

IV   Conclusion

By 1999, the average NYSE firm had a board which was comprised of 80% outside directors. Given the governance scandals of 2000-2001, the subsequent increase in public scrutiny of CEO malfeasance (via popular press), and the sweeping regulatory changes (SOX) which followed, how did boards alter their structure to accommodate shareholder demands for better oversight if nearly all boards were already outsider dominated? In this paper, I document that the primary change in the structure of the board between 1999 and 2005 was the removal of the CEO from the decision making process of the board. Over this time period, the number of board meetings which the CEO presided over decreased, yet more importantly, the fraction of time spent by outside directors in committees (apart from the CEO) discussing nominating, auditing, and compensation issues increased 200, 80, and 30 percent, respectively. In addition, the fraction of board work handled by the CEO in the executive committee decreased by 40%. In other words, outside directors would no longer allow CEOs to side-step board oversight and exercise control over investment/policy decisions through the executive committee. Hence, while board independence increased 5% between 1999 and 2005, the principal governance reform to take place during this period of time was the reduction in CEO influence and control over the investment and monitoring decisions of the board.

Following this, I investigate how firm-level determinants relate to the allocation of work within the board. 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, com-

plex firms (large and older firms) allocate a greater percentage of their monitoring and investment work to be performed outside of full board meetings and in committees. Next, CEOs with considerable power over the operations of the firm structure the board so that monitoring decisions are made in their presence and not handled by outside directors in committees. In regard to board investment decisions, high power CEOs also avoid the scrutiny of outside directors by spending a greater fraction of time in the executive committee, apart from the full board. Together these results demonstrate how powerful CEOs exercise control over board-level monitoring and investment decisions in the modern boardroom.

These findings 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 results presented here provide evidence that work allocation between the board and its committees is an important structural feature to consider when discussing issues pertaining to governance and board control.

Moreover, the empirical 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)). Yet, such a specification of the determinants of board size assumes that board members monitor the CEO in a full meeting structure (i.e. where the CEO and *all* board members interact in a particular meeting), and ignores the endogenous decision of work allocation to committees, which may foil or nullify any 'free-riding' explanation. While such a theory aptly applies to the board of the 1960s-1990s, 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. 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.

Thus, 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 within a given committee, board-level measures of director characteristics (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 yield faulty conclusions when implemented in empirical studies. Hence, if most board decisions now originate 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), and the independence of the executive committee. In addition, the summary statistics for the meeting structure of the board are also presented. These statistics include: the number of board meetings, the number of committee meetings (audit, compensation, nominating/governance, executive, outside executive sessions), the number of monitoring meetings (excluding audit, but including miscellaneous monitoring meetings and stakeholder meetings), and the fraction of each monitoring task performed in 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
Meeting Structure					
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
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, board meetings, compensation meetings, nominating/governance meetings, the fraction of work performed in compensation meetings, the fraction of work performed in nominating/governance meetings, outsider executive sessions, the fraction of work performed by 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 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 Monitoring Control

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), high CEO tenure (tenure greater than or equal to ten years), high CEO ownership (CEO ownership greater than or equal to one percent), 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 work performed in the compensation committee, the fraction of board work performed in the nominating/governance committee, the fraction of board work performed by 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 session 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	0.0078	0.0073	0.0106	0.0097	0.0160	0.0149	0.0081	0.0068
	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.05)	(0.10)
Segments	0.0029	0.0029	0.0061	0.0061	0.0043	0.0043	-0.0049	-0.0048
	(0.65)	(0.65)	(0.35)	(0.35)	(0.53)	(0.53)	(0.56)	(0.58)
Firm Age	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0001	0.0001
	(0.14)	(0.14)	(0.06)	(0.06)	(0.02)	(0.03)	(0.57)	(0.60)
FCF	0.0415	0.0434	0.0232	0.0287	0.0179	0.0220	0.0211	0.0275
	(0.51)	(0.49)	(0.70)	(0.63)	(0.78)	(0.72)	(0.81)	(0.75)
E-Index	-0.0027	-0.0027	0.0033	0.0034	0.0008	0.0008	0.0003	0.0002
	(0.44)	(0.45)	(0.34)	(0.32)	(0.83)	(0.81)	(0.94)	(0.96)
R&D	-0.0015	-0.0020	0.0019	0.0009	0.0003	-0.0010	0.0645	0.0626
	(0.88)	(0.84)	(0.86)	(0.93)	(0.96)	(0.92)	(0.00)	(0.00)
High CEO Tenure	-0.0121		-0.0332		-0.0260		-0.0296	
	(0.15)		(0.00)		(0.01)		(0.02)	
High CEO Own		-0.0128		-0.0298		-0.0301		-0.0349
		(0.19)		(0.00)		(0.00)		(0.01)
CEO Turnover	0.0101	0.0104	-0.0086	-0.0070	0.0007	0.0010	-0.0160	-0.0155
	(0.21)	(0.18)	(0.27)	(0.36)	(0.92)	(0.89)	(0.17)	(0.19)
Director Turnover	-0.0029	-0.0028	0.0026	0.0029	-0.0013	-0.0012	0.0060	0.0061
	(0.63)	(0.64)	(0.68)	(0.64)	(0.84)	(0.84)	(0.56)	(0.55)
Director Own	-0.0016	-0.0017	0.0016	0.0013	-0.0016	-0.0019	0.0033	0.0029
	(0.68)	(0.66)	(0.67)	(0.72)	(0.69)	(0.62)	(0.58)	(0.62)
Inst Own	0.0336	0.0279	0.0463	0.0327	0.0491	0.0359	0.0818	0.0664
	(0.15)	(0.20)	(0.07)	(0.19)	(0.08)	(0.19)	(0.02)	(0.04)
Market-to-Book	0.0011	0.0008	0.0022	0.0015	0.0022	0.0016	-0.0009	-0.0017
	(0.80)	(0.85)	(0.55)	(0.69)	(0.61)	(0.72)	(0.88)	(0.78)
Ind Adj Ret	0.0050	0.0057	0.0199	0.0216	0.0154	0.0170	-0.0098	-0.0080
	(0.63)	(0.59)	(0.04)	(0.03)	(0.15)	(0.12)	(0.54)	(0.62)
Fraud/Restatement	0.0058	0.0062	0.0036	0.0048	0.0087	0.0096	-0.0081	-0.0071
	(0.57)	(0.54)	(0.70)	(0.61)	(0.40)	(0.36)	(0.55)	(0.60)
High Acq	0.0059	0.0059	-0.0057	-0.0056	-0.0003	-0.0001	-0.0037	-0.0035
	(0.42)	(0.41)	(0.45)	(0.45)	(0.96)	(0.98)	(0.75)	(0.77)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2	0.0697	0.0697	0.1267	0.1236	0.1167	0.1183	0.0768	0.0770

Table IV: Determinants of Board/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), high CEO tenure, high 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 work performed by the CEO in executive committee outside of the 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 work performed by the CEO in executive and investment committees (Frac Inv/Exec), and an indicator variable of one if the CEO 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	0.0083	0.1293	0.1618	0.0134	0.0135	0.2106	0.2124
	(0.04)	(0.03)	(0.10)	(0.06)	(0.00)	(0.00)	(0.01)	(0.00)
Segments	0.0002	0.0002	0.0665	0.0528	0.0019	0.0019	0.0936	0.0870
	(0.97)	(0.96)	(0.70)	(0.77)	(0.83)	(0.83)	(0.52)	(0.55)
Firm Age	0.0004	0.0004	0.0176	0.0178	0.0001	0.0001	0.0013	0.0007
	(0.29)	(0.25)	(0.07)	(0.06)	(0.84)	(0.87)	(0.85)	(0.90)
FCF	-0.0068	-0.0107	-1.5945	-1.8233	0.0013	-0.0018	-1.0634	-1.1233
	(0.91)	(0.85)	(0.40)	(0.34)	(0.98)	(0.98)	(0.46)	(0.44)
E-Index	-0.0003	-0.0004	-0.0898	-0.0842	0.0004	0.0002	0.0135	0.0118
	(0.94)	(0.92)	(0.36)	(0.38)	(0.94)	(0.96)	(0.86)	(0.88)
R&D	-0.0065	-0.0060	0.2008	0.2638	0.0155	0.0156	0.6676	0.6583
	(0.52)	(0.55)	(0.61)	(0.51)	(0.28)	(0.27)	(0.04)	(0.05)
High CEO Tenure	0.0229		0.5489		0.0183		0.3745	
	(0.05)		(0.04)		(0.16)		(0.08)	
High CEO Own		0.0197		0.5633		0.0114		0.1848
		(0.08)		(0.05)		(0.29)		(0.39)
CEO Turnover	0.0016	0.0002	0.0166	-0.0072	-0.0053	-0.0069	-0.1825	-0.2262
	(0.85)	(0.98)	(0.94)	(0.98)	(0.59)	(0.48)	(0.39)	(0.28)
Director Turnover	-0.0011	-0.0014	-0.0474	-0.0504	-0.0022	-0.0026	-0.1307	-0.1389
	(0.87)	(0.83)	(0.82)	(0.81)	(0.78)	(0.75)	(0.46)	(0.43)
Director Own	0.0034	0.0036	0.1052	0.1209	0.0025	0.0026	0.0661	0.0670
	(0.52)	(0.49)	(0.30)	(0.23)	(0.66)	(0.64)	(0.51)	(0.50)
Inst Own	-0.0686	-0.0599	-0.6636	-0.3895	-0.0600	-0.0543	-0.3098	-0.2219
	(0.05)	(0.08)	(0.26)	(0.49)	(0.08)	(0.12)	(0.54)	(0.68)
Market-to-Book	-0.0015	-0.0010	-0.1906	-0.1733	0.0042	0.0045	0.1241	0.1305
	(0.73)	(0.81)	(0.28)	(0.33)	(0.48)	(0.44)	(0.24)	(0.22)
Ind Adj Ret	-0.0041	-0.0052	-0.2127	-0.2309	-0.0030	-0.0037	-0.1160	-0.1297
	(0.70)	(0.64)	(0.53)	(0.49)	(0.81)	(0.77)	(0.68)	(0.64)
Fraud/Restatement	-0.0030	-0.0038	-0.0139	-0.0387	0.0050	0.0044	0.1317	0.1163
	(0.79)	(0.74)	(0.96)	(0.89)	(0.72)	(0.66)	(0.57)	(0.61)
High Acq	-0.0050	-0.0051	-0.1025	-0.0910	-0.0005	-0.0004	-0.0694	-0.0567
	(0.55)	(0.54)	(0.69)	(0.72)	(0.95)	(0.96)	(0.74)	(0.78)
N	1356	1356	1356	1356	1356	1356	1356	1356
R^2/p-value	0.0832	0.0820	0.0001	0.0001	0.0818	0.0805	0.0001	0.0001

Table V: Changes in Operational Form 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 board meeting observations. The variables presented below are the following: board size, independence, board 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 work handled by the executive committee (Frac Exec), and work done in the executive committee (Work in Exec Com). Board meetings include executive committee meetings. Work in Exec Com takes a value of one if Frac Exec is greater than 25%. 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 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
Unadjusted Matched Sample									
2005 Sample	9.73	0.831	8.59	0.390	0.313	0.520	0.061	0.055	0.087
	[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
	[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]	**[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
	[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
	[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]	**[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
Unadjusted Matched Sample									
2005 Sample	9.78	0.830	8.51	0.391	0.320	0.518	0.061	0.058	0.093
	[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
	[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]	**[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
	[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
	[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]	**[0.057]**	[0]	**[0.067]**	**[0.333]**	**[0.243]**	[0]	[0]	

Table VI: 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: board 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]