

THE IMPACT OF DIRECTOR MONITORING ROLE ON OWNERSHIP:
THE ANTI-AGENCY THEORY

by

John Incardona

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in Partial Fulfillment of the Requirements for the Degree of
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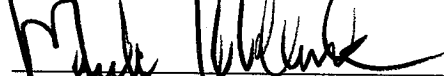
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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Mark Kohlbeck, School of Accounting, and has been approved by the members of his supervisory committee. It was submitted to the faculty of the College of Business and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

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I investigate the association between independent directors' monitoring roles as distinguished by whether they reside on the audit committee (ACs) or not (NACs) and their respective ownership and whether Section 301 or a proxy for alternative independent monitoring (the percentage of institutional ownership) affects this relation. Specifically, I examine whether the objectivity required of serving as an AC (consistent with their audit function role) or alignment with investors (consistent with agency theory) dominates in determining independent directors' level of share ownership. Using generalized estimations of equations I provide evidence that ACs hold less ownership than NACs that suggests differences with respect to independence in appearance/alignment with shareholder interests not previously documented amongst independent directors. I also find evidence that Section 301 may contribute to this differential ownership while the presence of institutional ownership moderates this relationship.

DEDICATION

To my mom, May, no words suffice. You have always been the strongest, wisest, most loving, consistent, supportive, nurturing and unselfish force in your children's lives without fail or exception. If second chances on life were being given out, you wouldn't qualify, you did it right the first time. I love you and pray for your health, happiness and longevity every single day.

To my dad, Giovanni, who highly valued education and told me I could do this, but passed just before I began the doctoral program. You'll never know how much I miss you and wish you were here to see me graduate. You were a true genius and I am wholly confident that you could have braced a lever with the moon and moved the earth if you wanted to. You were my best friend and I have never laughed as hard or had as much fun with anyone else in my life. Life is like a thread, it can break at any point. The day you stop moving is the day you die.

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CHAPTER 1: INTRODUCTION, MOTIVATIONS, AND CONTRIBUTIONS

I investigate the association between independent directors' monitoring roles and their respective ownership. I distinguish between whether directors are audit committee members (hereafter referred to as ACs) or non-audit committee members (hereafter referred to as NACs). Barrier (2002) raises several important issues highlighting the inherent independence concerns that arise within the ability for ACs to own stock in the firms that they are charged with monitoring. First, the irony in that outside auditors cannot own any stock in the firms they audit due to independence concerns while ACs can own all the stock they wish. Second, the ability for ACs to own stock in conjunction with their potential ability to take actions that influences the stock price. Third, the potential positive association between AC's ownership and their sensitivity to stock price declines which can diminish their wealth.

Thus, Barrier (2002) motivates me to examine the association between directors' monitoring roles and their respective ownership in an effort to answer several research questions. First, I examine whether the association between directors' monitoring roles and ownership differs between ACs and NACs consistent with AC's ownership serving as an *ex ante* signal of their independence relative to NAC's ownership.¹

¹ Consistent with the post-SOX regulatory climate, any direct or indirect services or any transactions or relationships/affiliations other than that in the capacity of serving as a director or on a particular committee are grounds for a finding of non-independence.

I expect a differential association because directors' incentives (Jensen and Meckling 1976; Fama 1980; Fama and Jensen 1983) likely differ with respect to the monitoring role that they play consistent with distinctions made between ACs and NACs by auditors, the market for directors, and regulators (Cohen, Krishnamoorthy and Wright 2002; Srinivasan 2005; NYSE Listed Company Manual; NASDAQ Listing Rules).²

In addition, differential associations may arise, in part, from the conflict between company stock ownership guidelines and recent research findings. Many firms establish stock ownership guidelines for directors because they "further align their interests and actions with the interests of the Company's stockholders" consistent with agency theory claims.³ Hence, consistent with these notions, directors are encouraged and/or required to hold stock. While many firms typically hold ownership requirements constant across the board for non-officer directors (of which my sample of independent directors is a subset of), I am unaware of an ownership policy that explicitly states why this is so. Thus, it would appear that firms do not perceive a need for distinguishing ownership requirements amongst non-officer directors.

In contrast to these notions, recent research finds AC's stock ownership is associated with greater potential for biased financial reporting suggesting an inherent conflict of interest in the ability (or requirement) of ACs to hold stock of the companies they are charged with monitoring (the occurrence of auditor dismissal, Carcello and Neal

² I use the term "market for directors" above consistent with Fama and Jensen's (1983) discussion regarding the employment market for directors and their ability to retain and acquire other board positions. The employment market for directors is referred to hereafter as "the market for directors" or simply "the market." Further, see Chapter 2 for a detailed discussion regarding regulatory distinctions between ACs and NACs and for a discussion regarding the legislative history of the "independence" rules. See Table 1 for a summary of NYSE/NASDAQ distinctions.

³ For example, see Advanced Micro Devices, Inc. Stock Ownership Guidelines on the web at http://www.amd.com/us-en/assets/content_type/DownloadableAssets/StockOwnershipGuidelines2008.pdf. (accessed May 29, 2009).

2003; earnings management, Yang and Krishnan 2005). *Ceteris paribus*, if the monitoring role of an AC creates differing incentives for ACs relative to NACs consistent with distinctions made between these groups and the potential association that AC's ownership has with financial reporting bias as recent research suggests, the monitoring role of an AC would likely have a negative association with their respective ownership consistent with ACs holding different (lower) levels of stock than that of NACs.

Second, I examine whether the uniform independence requirements imposed upon ACs by Section 301 of the Sarbanes-Oxley Act of 2002 affects the association between AC's monitoring role and their ownership.⁴ Section 301 directed the SEC and the exchanges to strengthen independence requirements.⁵ In addition, 301 serves as an overriding requirement that firms must comply with respect to AC independence in addition to their respective exchange listing standards regarding director independence.⁶ However, compliance with Section 301 and its requirements that strive to ensure independence in appearance does not rule out the potential for ACs to differ with respect to their actual state of mind regarding independence.

⁴ Section 301 is effective April 25, 2003 with listed issuers required to be in compliance by the earlier of (1) their first annual shareholders meeting after January 15, 2004, or (2) October 31, 2004 while foreign private issuers and small business issuers that are listed must be in compliance with the new listing rules by July 31, 2005. See Chapter 2 for a detailed discussion regarding the legislative history of the "independence" rules and for a discussion regarding pre- and post-SOX distinctions.

⁵ I refer to both the NYSE and the NASD as "exchanges" despite the fact that the NASD was registered as a "national securities association" at the time. The NASDAQ operated as a "facility" of the NASD up until July 31, 2006. The SEC initially approved exchange registration for the NASDAQ on January 13, 2006 (see SEC Release No. 34-53128; File No. 10-131) and modified approval on June 30, 2006 (see SEC Release No. 34-54085; File No. 10-131). The NASDAQ effectively began operations as an "exchange" on August 1, 2006. A national securities exchange is an exchange registered as such under Section 6 of the Exchange Act [15 U.S.C. 78f]. A national securities association is an association of brokers and dealers registered as such under Section 15A of the Exchange Act [15 U.S.C. 78o-3].

⁶ Both the NYSE and the NASDAQ listing standards instruct firms to not only comply with the exchange provisions but also with the independence requirements established under The Act. See Section 303A.06 in the NYSE Manual and Rule 4350(d)(2)(A) in the NASDAQ Manual.

Signaling theory argues that effective signals are derived from a set of choices (Spence 1973). Collectively, Section 301's uniform standards and the more stringent independence rules in the post-SOX climate effectively restricts the set of available choices that directors (especially ACs) have at their disposal to *ex ante* signal differing degrees of independence to the market. Therefore, I argue that the post-SOX climate provides a unique opportunity to examine AC's ownership because ACs may seek alternative ways to signal their differing degrees of independence via their respective company stockholdings.⁷

Third, my analysis acknowledges that the audit committee is but one part of the corporate monitoring framework. Thus, I examine whether the association between AC's monitoring role and their ownership is affected by their respective monitoring environment (as proxied by the percentage of institutional ownership and presence of a BigN auditor).

Borrowing from Denis and Sarin (1999), I employ a model of the determinants of director ownership. I include director tenure, indicator variables that distinguish between directors' monitoring roles (ACs versus NACs) and pre- versus post-SOX periods, and the percentage of institutional ownership and presence of a BigN auditor as proxies for alternative monitoring mechanisms to examine my hypotheses.

Consistent with my primary hypothesis, I provide evidence that indicates the monitoring role a director plays is associated with their ownership. In my sample of independent directors ACs appear to hold less ownership than NACs. I also find some

⁷ I acknowledge that ACs may signal their independence in other ways but focus on their respective company stockholdings in my analysis due to the inherent tension that arises from their ability to hold stock as discussed throughout. Further, their respective ownership is a required and publicly observable disclosure via proxy statements.

evidence that 301 may contribute to the differential ownership between director monitoring groups. My results regarding the potential effect that BigN monitoring may have on the association between director monitoring roles and their respective ownership are inconclusive due to almost all of my sample firms having a BigN auditor. Further, my analyses suggest that alternative monitoring in the form of institutional ownership of the firm may moderate the differential ownership between ACs and NACs.

My categorization of ACs (directors that participate on the audit committee) and NACs (directors that do not participate on the audit committee) allows for the possibility of an AC to also participate on other board non-audit committees. Therefore, I also categorize directors with respect to those that only serve on the audit committee (ACONLYs), those that only serve on non-audit committees (NACONLY's) and those that perform both functions (ACNACs). To ensure meaningful comparisons, I re-examine my analyses using a sub-sample of firms having these monitoring groups present on the board and find an insignificant association between ACONLY directors and their respective ownership. I also find no evidence of an association between ACONLY and Section 301 and/or institutional monitoring.

My results provide several contributions. First, the differential association between director groups may suggest differences with respect to independence in appearance and/or alignment with shareholder interests not previously documented amongst independent directors. My findings likely have implications for both prior and future research in that the differential association between independent directors' monitoring roles and their respective ownership and/or the potential impacts from other monitoring mechanisms may suggest *ex ante* components of financial reporting

objectivity not previously considered. Further, my results suggest that firms may find it necessary to revisit the “one-size fits all” approach that firms typically have regarding company stock ownership guidelines for non-officer directors. I know of no other study that examines the association between independent directors’ monitoring roles and their respective ownership.

Second, the SEC views ACs as playing a “critical role” in the monitoring of a company's financial reporting system of which AC independence has always been viewed as an essential component.⁸ My results help to shed light upon recent regulations affecting ACs imposed by Section 301. My findings reveal that Section 301 may contribute to the differential ownership between ACs and NACs suggesting that regulatory distinctions between ACs and NACs may have resulted in unintended consequences. Regulators will likely find such information useful in assessing independence concerns within the existing regulatory climate and/or when independence guidelines are revisited in the future. I know of no other study that examines whether Section 301 is associated with AC’s ownership.

Third, the presence of institutional ownership appears to moderate the differential ownership relationship between ACs and NACs consistent with ACs viewing institutional investors as an alternative monitoring mechanism. Both regulators and investors will likely benefit from a better understanding of the influence that a director’s monitoring role has on their respective ownership as well as the effect that Section 301 and other monitoring mechanisms have on the important role that ACs play in the monitoring process.

⁸ Federal Register / Vol. 68, No. 73 / Wednesday, April 16, 2003 / Rules and Regulations, page 18789.

The organization of the balance of this paper is as follows. Chapter 2 provides detailed background information relating to the following: (1) regulatory preclusion of stock ownership from independence considerations; (2) stock ownership guidelines; (3) regulatory distinctions between ACs and NACs; and (4) a comprehensive legislative history of independence rules including a discussion of the distinctions between pre- and post-SOX independence rules. Chapter 3 reviews the literature supporting my hypotheses. Chapter 4 develops my hypotheses. Chapter 5 presents the research design including a discussion of my model, estimation approach and my sample. Chapter 6 discusses my results and sensitivity while Chapter 7 presents my conclusions.

CHAPTER 2: BACKGROUND

This chapter may be omitted without loss of continuity and provides detailed background information relating to the following: regulatory preclusion of stock ownership from independence considerations; company stock ownership guidelines; regulatory distinctions between ACs and NACs; and a comprehensive legislative history of independence rules including a discussion of the distinctions between pre- and post-SOX independence rules.

1. Regulatory Preclusion of Stock Ownership from Independence Considerations

Regulators specifically choose to not consider stock ownership as contributing to a lack of director objectivity in both the pre- and post-SOX climate. For example, the NASDAQ has always stated in its Listing Rules Manual that NASDAQ does not believe that ownership of company stock by itself would preclude a board finding of independence.⁹ The NYSE also states in its Listing Rules Manual that “as the concern is independence from management, the Exchange does not view ownership of even a significant amount of stock, by itself, as a bar to an independence finding.”¹⁰

In addition, while Section 10A of the Securities Exchange Act of 1934 as amended by Section 301 (hereafter referred to as The Act) includes an ownership threshold safe-harbor provision within its definition of “control” with respect to

⁹ See (Interpretive Material) IM-4200. Definition of Independence – Rule 4200(A)(15); (IM-5605 as of 04/13/09).

¹⁰ See 303A.02(a) Commentary.

“affiliated persons”, The Act does not intend for this threshold to automatically preclude ACs exceeding the threshold from being considered independent.¹¹ Thus, there is not an upper limit on share ownership that automatically disqualifies an AC from being independent.

2. Stock Ownership Guidelines

Firms claim that required stock ownership holdings align director and officer interests and actions with the interests of the Company’s outside shareholders.¹² Stock ownership guidelines are an inherent part of organizational policies for many firms (typically included within firms’ corporate governance guidelines) and therefore are associated with director stock ownership. Firms typically disclose within their proxy statements established stock ownership guidelines regarding minimum stock ownership levels for directors and executive officers. Some firms only have such guidelines for executive officers and vice presidents and not for directors.¹³ In addition, firms typically stipulate time periods (3 years, 5 years, etc.) in which new executives or directors are expected to attain stock ownership levels.¹⁴ Such holdings are typically expressed either as a total number of shares, a total dollar amount (market value), or as a multiple of annual salary.

¹¹ See Rule 10A-3(e)(1)(ii)(A)(1) which defines the term “control” as beneficial ownership, directly or indirectly, of more than 10% of any class of voting equity securities and Rule 10A-3(e)(1)(B).

¹² For example, see Advanced Micro Devices, Inc. Stock Ownership Guidelines on the web at http://www.amd.com/us-en/assets/content_type/DownloadableAssets/StockOwnershipGuidelines2008.pdf (accessed May 29, 2009).

¹³ For example, see American Financial Group, Inc. Stock Ownership Guidelines on the web at <http://www.afginc.com/phoenix.zhtml?c=89330&p=irol-govownership> (accessed May 29, 2009).

¹⁴ For example, see Western Digital Corporation Executive Stock Ownership Guidelines on the web at <http://www.wdc.com/en/company/governance/executivestockownershipguidelines.asp> and Director Stock Ownership Guidelines at <http://www.wdc.com/en/company/governance/stockownershipguidelines.asp> (accessed May 29, 2009).

These guidelines typically differ with respect to executives and directors in several ways. Ownership guidelines are usually mandatory company policies for executives but can be either mandatory or encouraged for directors or not stipulated at all. In addition, while ownership guidelines for executives usually impose the highest requirements upon the CEO (i.e., 5 times base salary) and vary with respect to other senior level officers (i.e., 1 times base salary), guidelines do not discriminate amongst non-officer directors (i.e., all non-officer directors are held to the same ownership guidelines).

Non-officer directors' stock ownership levels therefore typically consist of both a "non-choice" aspect with respect to the minimum or established floor of ownership that they may not allow their holdings to fall below and a "choice" aspect with respect to how much stock they choose to own despite such minimums. Thus, the choice that directors make regarding stock ownership is one of how much they choose to deviate from their respective company's ownership guidelines.

3. Regulatory Distinctions Between ACs and NACs

Regulators distinguish between director roles, most notably when viewed from the perspective of those directors that serve on an audit committee versus those directors that do not. Specifically, regulators distinguish ACs from NACs with regards to the requirement of an audit committee versus other board committees, the inability to delegate AC's duties across the remainder of the board versus other director duties, and the existence of additional more stringent requirements regarding AC's independence and the demands placed upon ACs due to their role on the audit committee as opposed to NACs.

For example, the NYSE (NASDAQ) has required listed firms to have an audit committee since July 1, 1978 (February 1, 1989). In contrast, it is only in the post-SOX climate that the NYSE requires listed firms to specifically have other board of director committees (i.e., a nominating/corporate governance committee and a compensation committee) composed entirely of independent directors while the NASDAQ has never required boards of directors of listed companies to have other committees (i.e., a nominating committee and/or a compensation committee).¹⁵

Further, in both pre- and post-SOX, the exchange listing standards specifically differentiate the role of ACs from the remainder of the board of directors by specifically prohibiting the delegation of AC's duties to other members of the board.¹⁶ For example, the NYSE listing standards state, "To avoid any confusion, note that the audit committee functions ... are the sole responsibility of the audit committee and may not be allocated to a different committee."¹⁷ Likewise, the NASDAQ specifically discusses that the delegation of AC's duties and functions to other board members and/or committees are specifically prohibited.¹⁸ In contrast, the NYSE and the NASDAQ both *allow* boards of directors to allocate the responsibilities of other committees (i.e., nominating, corporate governance, and/or compensation) to be performed by simply a majority of the

¹⁵ See Sections 303A.04 Commentary and 303A.05 Commentary of the NYSE listing standards, effective November 4, 2003.

¹⁶ I refer to both the NYSE and the NASD as "exchanges" despite the fact that the NASD was registered as a "national securities association" at the time. The NASDAQ operated as a "facility" of the NASD up until July 31, 2006. The SEC initially approved exchange registration for the NASDAQ on January 13, 2006 (see SEC Release No. 34-53128; File No. 10-131) and modified approval on June 30, 2006 (see SEC Release No. 34-54085; File No. 10-131). The NASDAQ effectively began operations as an "exchange" on August 1, 2006. A national securities exchange is an exchange registered as such under Section 6 of the Exchange Act [15 U.S.C. 78f]. A national securities association is an association of brokers and dealers registered as such under Section 15A of the Exchange Act [15 U.S.C. 78o-3].

¹⁷ See Section 303A.07 General Commentary.

¹⁸ See 4350(c)(3)(A)(i); (ii) and 4350(c)(3)(B)(i); (ii) and 4350(c)(4)(A)(i) and (ii).

independent directors from the board or different committees as the board sees fit.¹⁹

Thus, in both pre- and post-SOX, the exchanges differentiate the role of ACs from the remainder of the board with respect to allocation of duties.

The roles of ACs versus NACs are also distinguished by additional requirements imposed upon ACs within the exchange listing standards. For example, the NASDAQ Interpretive Material acknowledges that there are additional, more stringent requirements for independence that apply to ACs but there is no such distinction made for NACs.²⁰ Section 303A.07(a) Commentary of the NYSE listing standards specifically states that, “Because of the audit committee’s demanding role and responsibilities, and the time commitment attendant to committee membership, each prospective audit committee member should evaluate carefully the existing demands on his or her time before accepting this important assignment.” Further distinction is made with respect to the number of other audit committees (more than three) that an AC may serve on. The NYSE Manual states that the “board must determine that such simultaneous service would not impair the ability of such member to effectively serve on the listed company’s audit committee and disclose such determination...”

In contrast, the NYSE Manual does not stipulate any additional requirements nor does it specify any cautions regarding the responsibilities of and the time commitment attendant to membership on other board committees. Nor are there any stipulations for directors serving on other committees regarding the number of other committees that

¹⁹ See Sections 303A.04 Commentary and 303A.05 Commentary of the NYSE listing standards, effective November 4, 2003 and 4350(c)(3)(A)(i); (ii) and 4350(c)(3)(B)(i); (ii) and 4350(c)(4)(A)(i) and (ii) of the NASDAQ listing standards.

²⁰ See (Interpretive Material) IM-4200. Definition of Independence – Rule 4200(A)(15); (IM-5605 as of 04/13/09).

such directors may serve on as is stipulated for ACs. In these situations, the exchanges make clear distinctions between the roles of ACs versus that of NACs.

Section 301 explicitly defines the roles that ACs must play by stipulating the direct responsibility that ACs have in the financial reporting process. Section 301 burdens ACs with additional obligations by making ACs directly responsible for the following: the appointment, compensation and oversight of the work done by the auditor pertaining to the firm's external financial reporting; resolving financial reporting disagreements between management and auditor; hiring independent counsel and other advisors as it sees fit. Section 301 places ACs directly in the middle of management/auditor conflicts by further making ACs directly responsible for resolving financial reporting disagreements between management and auditor and this responsibility cannot be delegated or shared with NACs. Section 301 also gives ACs legal rights by providing that ACs may hire independent counsel and other advisors as it sees fit without approval by the BOD at large. Section 301 further states that auditors are to report directly to the audit committee.²¹ Thus, Section 301 makes clear distinctions between the roles, rights and responsibilities of ACs versus that of NACs.

4. Legislative History of Independence Rules

In this section I discuss the legislative history and emphasis (or lack thereof) on "independence." I begin by discussing general historical background that leads up to the listing requirements established by the NYSE and the NASDAQ in 1999. Second, I discuss distinctions between the 1999 rules including exceptions to the rules. Third, I discuss Section 301 of the Sarbanes-Oxley Act and its amendment of Section 10A of the

²¹ Sarbanes-Oxley Act (SOX, 2002). Pub. L. 107-204, July 30, 2002, 116 Stat. 775, §301 (codified at 15 U.S.C. Chapter 2B §78j-1(m)(1)).

Securities Exchange Act of 1934 and the directives it imposed upon the national exchanges or associations. I also discuss the exceptions that Section 301 provides for. Fourth, I discuss the Final Rules established by the NYSE and the NASDAQ and the distinctions between them. Fifth, I discuss the distinctions between the amendment of Section 10A and the Final NYSE/NASDAQ Rules. Lastly, I discuss the distinctions between the legislative construct of “independence” both pre- and post-SOX.

4-1. Historical Background

In 1940, the SEC recommended that audit committees consist of “non-officers” in their report on their investigation of the auditing practices of McKesson & Robbins, Inc.²² Approximately thirty years later, in 1972, the SEC recommended that companies establish audit committees composed of “outside” directors.²³ Two years later, on December 20, 1974, the SEC adopted rules requiring disclosures about audit committees.²⁴

It wasn't until July 1, 1978 that the NYSE required that audit committees consist of directors that are “independent” of management. However, the NYSE did not define the term “independent”. Later that year, on December 6, 1978, the SEC adopted further rules requiring disclosures about audit committees.²⁵

Consistent with the ambiguous emphasis on “independence” thus far, audit committees still contained affiliated individuals (i.e., not considered to be “independent”). Evidence is provided by Vicknair, Hickman and Carnes (1993) in their

²² See In the Matter of McKesson & Robbins, Accounting Series Release (ASR) No. 19, Exchange Act Release No. 2707 (December 5, 1940).

²³ See ASR No. 123 (March 23, 1972).

²⁴ See Release No. 34-11147 (December 20, 1974).

²⁵ See Release No. 34-15384 (December 6, 1978).

analysis of audit committee composition regarding independence. They examine a sample of 100 NYSE firms from 1980-1987 and find that 74% of the firms had at least one affiliated director on its audit committee. Affiliated directors are defined as directors that have interlocking directorships, or are executives or directors of major suppliers or customers, individuals or employees receiving fees from commercial banking, investment banking, consulting, legal services, retirees of the firm, or relatives of management.

Approximately a decade after the NYSE “independence” requirement in October, 1987 the Treadway Commission suggested that audit committees consist of solely “independent” directors. The Commission was sponsored by the AICPA, the AAA, the Financial Executives Institute, the Institute of Internal Auditors, and the National Association of Accountants. These groups were referred to collectively as the Committee of Sponsoring Organizations.

On February 1, 1989, the NASD required audit committees to have a majority of “independent” directors. However, just as the NYSE did over two decades earlier, the NASD did not specify what “independent” means.

In 1991, the FDIC required large banks to have audit committees consisting solely of “outside” directors. However, just as the NYSE and the NASD did before, the FDIC did not specify what “outside” means. Subsequently, on July 22, 1991, the Board of Governors of the Federal Reserve System, Division of Banking Supervision and Regulation required that boards of directors of banks in operation five years or less should have at least two “outside” directors with prior banking-related experience.²⁶

²⁶ See Supervisory Letter (SR) 91-17 (FIS).

On September 28, 1998, then SEC Chairman Arthur Levitt called for a strengthening of the audit committee role in financial reporting stating that “qualified, committed, independent and tough-minded audit committees represent the most reliable guardians of the public interest.” He further notes in his speech before NYU that the NYSE and the NASD have agreed to sponsor a "blue-ribbon" panel to be headed by John Whitehead, former Deputy Secretary of State and retired senior partner of Goldman, Sachs, and Ira Millstein, a lawyer and noted corporate governance expert. The purpose of the panel was to develop within the next 90 days a series of far-ranging recommendations intended to empower audit committees.

Levitt notes that this Blue Ribbon Committee is to “function as the ultimate guardian of investor interests and corporate accountability. They are going to examine how we can get the right people to do the right things and ask the right questions.”²⁷ The Committee recommendations promulgated the NYSE and the NASD to revise their listing requirements (Blue Ribbon Committee 1999).

4-2. The 1999 Exchange Rules

In December, 1999, both the NYSE and the NASD required audit committees of listed companies to have at least 3 “independent” directors and that ACs must have “no relationship to the company that may interfere with the exercise of their independence from management and the company.”²⁸ This is the first time that “independence” was specifically defined by the exchanges based on prohibited individuals and/or relationships as presented in Figure 1.

²⁷ See Remarks by Chairman Arthur Levitt, Securities and Exchange Commission, The "Numbers Game" NYU Center for Law and Business, New York, N.Y. September 28, 1998.

²⁸ See Section 303.01(2)(a) of the NYSE Listed Company Manual and Section 4310(B)(26)(B)(i) of the NASD Manual in effect at this time.

(Insert Figure 1)

Distinctions Between the 1999 Exchange Rules: The independence criteria for directors set forth in both the NYSE and the NASD Listed Company Manuals are primarily the same except for the following:

- The NYSE and the NASDAQ define an “immediate family member” exactly the same except that the NYSE includes brother- or sister-in-law in the list of individuals meeting this definition.
- The NYSE allows the company’s BOD to determine whether a particular business relationship interferes with a director’s independence while the NASD specifies monetary thresholds that, when exceeded, is deemed to interfere with director independence.
- Only the NASD considers inter-company relations and specifies a monetary threshold regarding payments to director’s outside companies as discussed above.

Exceptions to the 1999 Rules: Despite these rules, both exchanges allowed for the possibility for firms to place “non-independent” directors on audit committees. The NASD allowed the BOD under “limited circumstances” to appoint any noncurrent employee or family member to the audit committee. The NASD also allowed small business filers to have audit committees of at least two members, a majority of which shall be independent.²⁹ The NYSE allowed the BOD to appoint directors to audit committees with business relationships to the firm if, in the board’s opinion, that relationship does not compromise the independence of the AC.³⁰ Thus, both exchanges

²⁹ See Rule 4350(d)(2)(B) of the NASD Manual in effect at the time.

³⁰ See Section 303.01(B)(3)(b) of the NYSE Listed Company Manual in effect at the time.

did not totally rule out the potential for audit committees to contain “non-independent” members.³¹

4-3. Section 301 of the Sarbanes-Oxley Act

It wasn't until approximately four years after the exchanges first attempt to define “independence” that the exchanges were prompted again to adopt more stringent listing standards regarding audit committee member independence by Section 301. Section 301 of the Sarbanes-Oxley Act builds upon the 1999 exchange listing requirements by amending Section 10A of the Securities Exchange Act of 1934 by adding subsection (m) Standards Relating to Audit Committees as codified in Title 15 U.S.C. Chapter 2B §78j-1(m)(1).

Section 301 is effective April 25, 2003 and served as a directive to the SEC to direct the national securities exchanges/associations to provide proposed rules (or amendments of current rules) that comply with the requirements of Exchange Act Rule 10A-3. The proposed rules were to be provided to the SEC no later than July 15, 2003. Further, the national securities exchanges/associations were required to have final rules approved by the SEC no later than December 1, 2003.³²

Subsequently, listed issuers are required to be in compliance with final rules by the earlier of (1) their first annual shareholders meeting after January 15, 2004, or (2) October 31, 2004. Foreign private issuers and small business issuers (as defined in Rule 12b-2) must be in compliance with the new listing rules by July 31, 2005.

³¹ For brevity's sake, I omit discussions regarding “curing” periods.

³² See 17 CFR Parts 228, 229, 240, 249 and 274; Release Nos. 33-8220 and 34-47654; (Investment Company ACT) IC-26001; File No. S7-02-03.

Section 10A(m)(3)(A) states that firms are required to have audit committees comprised solely of “independent” directors. Section 10A(m)(3)(B) specifically states that in order to be considered “independent”, “a member of an audit committee of an issuer may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee—(i) accept any consulting, advisory, or other compensatory fee from the issuer; or (ii) be an affiliated person of the issuer or any subsidiary thereof.”³³

However, the meaning of “accept” in Section 10A(m)(3)(B)(i) and the meaning of “affiliated person” Section 10A(m)(3)(B)(ii) are not provided within Section 10A(m). One has to look at the language within Rule 10A-3 Listing Standards Relating to Audit Committees of the General Rules and Regulations promulgated under the Securities Exchange Act of 1934 for further clarification of these terms.³⁴

Specifically, Rule 10A-3(b)(1)(ii)(A) states that in order to be “independent” an AC of a firm may not, other than in his or her capacity as a member of the audit committee, the BOD, or any other board committee “accept *directly or indirectly* (emphasis added) any consulting, advisory, or other compensatory fee from the issuer or any subsidiary thereof...”

Indirect acceptance is defined in Rule 10A-3(e)(8) to include acceptance of a fee by a spouse, a minor child or stepchild or a child or stepchild sharing a home with the AC. Further, indirect acceptance includes acceptance of a fee by an entity in which such AC is a partner, member, an officer, or occupies a similar position (except limited

³³ Rule 10A-3(b)(1)(iii) replaces the term “affiliated person” with “interested person” as defined in section 2(a)(19) of the Investment Company Act of 1940.

³⁴ See 17 CFR Part 240.

partners, non-managing members and those occupying similar positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary of the issuer.

An affiliated person is defined in Rule 10A-3(e)(1)(i) to include a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the person specified. “Control” is further clarified in Rule 10A-3(e)(1)(ii)(A)(1) as beneficial ownership, directly or indirectly, of more than 10% of any class of voting equity securities and in (2) as an executive officer. Rule 10A-3(e)(1)(iii)(A), (B), (C) and (D) also defines affiliates as executive officers, employees, general partners, and managing members, respectively. “Control” is also further defined in Rule 10A-3(e)(4) as “the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.”

Exceptions to Section 301 Independence Requirements: Section 301 also amends Section 10A of the Securities Exchange Act of 1934 (15 U.S.C. 78f) allowing for exceptions to the independence standard. Section 10A(m)(3)(C) provides for the SEC to allow firms an exemption from the independence requirements of subparagraph (B) regarding a particular relationship with respect to audit committee members, as the SEC determines appropriate in light of the circumstances.

Additional language is provided in Rule 10A-3 which provides for limited exceptions to the audit committee independence requirements, including a phase in period for companies following their initial registration and listing and for overlapping

board relationships. For non-investment company initial registrants, only one member of the audit committee must be independent at the time of initial listing; provided, however, that the issuer must have a majority of independent audit committee members within 90 days of the effective date of the registration statement and a fully independent committee within one year of the effective date of the registration statement.

With respect to overlapping board relationships, an AC may sit on the BOD of a listed issuer and any affiliate as long as the member meets the independence requirements for both companies (except for being a director on both boards) including receiving only ordinary board or committee compensation.³⁵

4-4. Final Rules Adopted by NYSE/NASDAQ

In accordance with the Section 301 directives, proposed rules adopted by the NYSE and the NASDAQ were approved by the SEC on 11/04/03.³⁶ Table 1 summarizes the NYSE/NASDAQ distinctions between ACs and NACs.

(Insert Table 1)

Both exchanges state that ACs must meet the independence criteria set forth in Exchange Act Rule 10A-3(b)(1). In addition, both exchanges strengthened listing standards regarding “independence” for directors in general by requiring that a company’s BOD must be comprised of a majority of “independent” directors. Thus, both

³⁵ For brevity’s sake, I omit discussion of exemptions regarding Dual-Holding Companies and “curing periods”.

³⁶ Note: The NASDAQ rules cited here are from the NASD Rules as they appeared in the NASD manual through July 31, 2006 and subsequently in the NASDAQ Rule 4000 series effective until 04/13/09 and are applicable to the sample period in my study. These old 4000 series rules (numbers and text) can be converted to the current applicable new 5000 series rules (numbers and text) effective on 04/13/09 via the Listing Rules Conversion Table located at <http://nasdaq.cchwallstreet.com/NASDAQ/Main/>.

exchanges also require that ACs must meet the definition of “independence” for directors at large as established within their respective listing standards.

It should be noted that the NASDAQ specifically acknowledges that independence requirements for ACs are more stringent than the requirements set forth for directors in general.³⁷ Further, as discussed later, the rules regarding fee payments to ACs as codified within Section 10A(m)(3)(B)(i) are more stringent than those established by either the NYSE or the NASDAQ.

Both exchanges require that “independent” directors must comprise a majority of a firm’s BOD. They further state that the BOD is responsible for making the determination as to “independence”. Both exchanges define director “independence” based on the prohibition of specific individuals and/or family relations and/or business relationships or affiliations.

NYSE Final Rules: Specifically, 303A.02(b) of the NYSE Listed Company Manual states a director is not independent if:

- The director is, or has been within the last three years, an employee of the listed company.
- A director’s immediate family member is, or has been within the last three years, an executive officer (excluding interim appointments), of the listed company.
- The director has received, or has an immediate family member who has received, during any twelve-month period within the last three years, more than \$100,000 (\$120,000 as of 08/12/08) in direct compensation from the listed company, other

³⁷ See (Interpretive Material) IM-4200. Definition of Independence – Rule 4200(A)(15); (IM-5605 as of 04/13/09).

than director and committee fees and pension or other forms of deferred compensation for prior service (provided such compensation is not contingent in any way on continued service). Note: Compensation received by a director for former service as an interim Chairman or CEO or other executive officer need not be considered in determining independence under this test. Compensation received by an immediate family member for service as an employee of the listed company (other than an executive officer) need not be considered in determining independence under this test.

- The director is a current partner or employee of a firm that is the company's internal or external auditor.
- The director has an immediate family member who is a current partner of a firm that is the company's internal or external auditor.
- The director has an immediate family member who is a current employee of a firm that is the company's internal or external auditor and personally works on the listed company's audit.
- The director or an immediate family member was within the last three years a partner or employee of a firm that is the company's internal or external auditor and personally worked on the listed company's audit within that time.
- The director or an immediate family member is, or has been with the last three years, employed as an executive officer of another company where any of the listed company's present executive officers at the same time serves or served on that company's compensation committee.

- The director is a current employee, or an immediate family member is a current executive officer, of a company that has made payments to, or received payments from, the listed company for property or services in an amount which, in any of the last three fiscal years, exceeds the greater of \$1 million, or 2% of such other company's consolidated gross revenues.

The NYSE defines an "immediate family member" as it did previously in its 1999 rules. An "immediate family member" includes a person's spouse, parents, children, siblings, mothers and fathers-in-law, sons and daughters-in-law, brothers and sisters-in-law, and anyone (other than domestic employees) who shares such person's home. The NYSE also notes that when applying the look-back provisions in Section 303A.02(b), listed companies need not consider individuals who are no longer immediate family members as a result of legal separation or divorce, or those who have died or become incapacitated.

NASDAQ Final Rules: Specifically, Rule 4200(a)(15) of the NASDAQ Listed Company Manual states a director is not independent if that person is:

- A director who is, or at any time during the past three years was, employed by the company.
- A director who accepted or who has a Family Member who accepted any compensation from the company in excess of \$60,000 (*\$120,000 as of 08/01/06) during any period of twelve consecutive months within the three years preceding the determination of independence, other than the following: (i) compensation for board or board committee service; (ii) compensation paid to a Family Member

who is an employee (other than an executive officer) of the company; or (iii) benefits under a tax-qualified retirement plan, or non-discretionary compensation, provided, however, that in addition to the requirements contained in this paragraph (B), audit committee members are also subject to additional, more stringent requirements under Rule 4350(d).

- A director who is a Family Member of an individual who is, or at any time during the past three years was, employed by the company as an executive officer.
- A director who is, or has a Family Member who is, a partner in, or a controlling shareholder or an executive officer of, any organization to which the company made, or from which the company received, payments for property or services in the current or any of the past three fiscal years that exceed 5% of the recipient's consolidated gross revenues for that year, or \$200,000, whichever is more, other than the following: (i) payments arising solely from investments in the company's securities; or (ii) payments under non-discretionary charitable contribution matching programs.
- A director of the issuer who is, or has a Family Member who is, employed as an executive officer of another entity where at any time during the past three years any of the executive officers of the issuer serve on the compensation committee of such other entity.
- A director who is, or has a Family Member who is, a current partner of the company's outside auditor, or was a partner or employee of the company's outside

auditor who worked on the company's audit at any time during any of the past three years.

The NASDAQ defines a "Family Member" to include a person's spouse, parents, children and siblings, whether by blood, marriage or adoption, or anyone residing in such person's home. This language is slightly different than the 1999 rules in that brother-in-laws and sister-in-laws are captured under this definition as opposed to being left out in the previous rules. In addition, the final rules included relations via adoption which were not specifically included before.

Distinctions Between the NYSE/NASDAQ Final Rules: The independence criteria for directors set forth in both the NYSE and the NASDAQ Listed Company Manuals are primarily the same except for the following:

- The NYSE uses the term "Immediate Family Members" while the NASDAQ simply uses the term "Family Members". The terms are defined exactly the same except that the NYSE excludes domestic employees from the definition and the NASDAQ specifically includes relations via adoption.
- Both exchanges have established threshold requirements regarding payments to directors (other than director fees, etc. as discussed above). The NASDAQ prohibits payments in excess of \$60,000 (\$120,000 as of 08/01/06) while the NYSE prohibits more than \$100,000 (\$120,000 as of 08/12/08) per year for the current or past 3 years received by a director or the director's (immediate) family member (as defined above).

- The exclusions to the prohibited payments immediately above are the same for both exchanges except that the NYSE also excludes compensation received as an interim Chairman or CEO or other executive.
- While both the NYSE and the NASDAQ prohibit the same associations with the firm's external auditor, the NYSE also includes in its prohibition the firm's internal auditor.
- Both exchanges have established threshold requirements regarding payments to or from the company and certain organizations that a director is a current employee (or an immediate family member is an executive officer) as discussed above. The NASDAQ extends this concept to controlling shareholders. The NASDAQ prohibits payments in excess of the greater of 5% of the consolidated gross revenues or \$200,000 for any year within the past 3 fiscal years, the NYSE prohibits thresholds of the greater of 2% or \$1 million.

4-5. Distinctions Between the Security Exchange Act (as amended) and the NYSE/NASDAQ Final Rules

The distinctions between Section 10A of the Securities Exchange Act of 1934 as amended by Section 301 of SOX (and the corresponding General Rules and Regulations hereafter referred to as the Act) and the associated final exchange listing rules approved by the SEC can be categorized with respect to the following: family relations, affiliations, fee payments for non-director services, stock ownership, exemptions from independence, and corporate business relationships.

Family Relations: While Rule 10A-3(e)(8) of the Act includes family relations in its definition of "indirect acceptance" of fees, Rule 10A-3(e)(1) does not specifically include family relations in its definition of "affiliated". However, the exchange listing

requirements do consider family relations in their list of individuals that would not be considered “independent” directors. Thus, the lack of including and defining family relations in the definition of affiliated within Rule 10A-3 is inconsequential because the exchanges consider such relations in their final listing requirements for directors at large.

Affiliations: Rule 10A-3(e)(1)(i) of the Act defines an affiliated person to include a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the person specified. The Act defines the term “control” in Rule 10A-3(e)(1)(ii)(A)(1) as beneficial ownership, directly or indirectly, of more than 10% of any class of voting equity securities of the specified person and in (2) as an executive officer of the specified person. Rule 10A-3(e)(1)(iii)(A), (B), (C) and (D) also defines affiliates as executive officers, employees, general partners, and managing members, respectively. “Control” is further defined in Rule 10A-3(e)(4) as “the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.”

These rules are similar to the final exchange listing rules except that the Act allows for a safe harbor provision in the assessment of whether a person falls within the category of an affiliate. However, the Act does not intend for this definition to automatically preclude someone that owns more than 10% of voting equity from being considered independent (as long as the individual is not an executive officer). Thus, there is not an upper limit on share ownership that automatically disqualifies an AC from being independent (see Stock Ownership subsection below).

Fee Payments for Non-Director Services: Section 10A(m)(3)(B)(i) of the Act states that in order to be considered “independent”, “a member of an audit committee of an issuer may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee—(i) accept any consulting, advisory, or other compensatory fee from the issuer. Section 10A(m)(3)(B)(i) prohibits **any** fees paid other than those related to the ACs capacity as a board/committee member. However, the final exchange listing requirements do allow payments to directors within specified monetary thresholds for purposes of defining director “independence”.³⁸ Section 10A is more stringent than the final exchange listing rules in that Section 10A has a “zero-tolerance” policy with respect to fee payments to ACs other than those fees paid within the AC’s capacity as a member of the audit committee, the BOD, or any other board committee.

Stock Ownership: Section 10A of the Act does not specifically address stock ownership by ACs other than within the safe-harbor provisions contained within the definition of an affiliated person discussed above. However, the NASDAQ has always specifically stated in its Listing Rules Manual that NASDAQ does not believe that ownership of company stock by itself would preclude a board finding of independence.³⁹ In addition, the NYSE specifically states in its Listing Rules Manual that “as the concern is independence from management, the Exchange does not view ownership of even a

³⁸ The monetary thresholds established by the NASDAQ and the NYSE are as follows (NYSE distinctions are in parentheses where applicable): Payments in excess of \$60,000 (\$100,000) per year for the current or past 3 years received by a director or the director’s (immediate) family member other than director and committee fees and pension benefits. The NASDAQ increased the threshold from \$60,000 to \$120,000 as of August 1, 2006. The NYSE also increased the threshold from \$100,000 to \$120,000 as of August 12, 2008.

³⁹ See (Interpretive Material) IM-4200. Definition of Independence – Rule 4200(A)(15); (IM-5605 as of 04/13/09).

significant amount of stock, by itself, as a bar to an independence finding.⁴⁰ Thus, there is no effective distinction regarding stock ownership between Section 10A and the final exchange listing requirements.

Exemptions from Independence: The Act allows for exemptions to the independence standard. Section 10A(m)(3)(C) of the Act provides for the SEC to allow firms an exemption from the independence requirements of subparagraph (B) regarding a particular relationship with respect to ACs, as the SEC determines appropriate in light of the circumstances.

However, the NASDAQ specifically allows for exemptions to be made regarding independence of ACs subject to the determination of the BOD under “exceptional and limited circumstances”.⁴¹ Members appointed in this manner may not serve longer than two years and may not chair the audit committee. The NYSE allows for exemptions to be made regarding independence of directors in general. The NYSE allows for a BOD to determine that a director’s particular business relationship is not material whereby concluding that the director is “independent” as long as the determination is disclosed in the company’s annual proxy statement or on Form 10-K.⁴² In this manner there is a distinction in that Section 10A removes the ability of BOD to make exemptions regarding independence for those directors that serve on the audit committee.

Corporate Business Relationships: As discussed earlier, the Act includes in its definition of “indirect acceptance” by a member of any consulting, advisory or other compensatory fee, acceptance by an entity that the member is a partner or officer of and

⁴⁰ See 303A.02(a) Commentary.

⁴¹ See Rule 4350(d)(2)(B).

⁴² See 303A.02(a) Commentary.

that provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary.

As noted earlier, both exchanges have established threshold requirements regarding payments to or from the company and certain organizations that a director is a current employee (or an immediate family member is an executive officer). The NASDAQ extends this concept to controlling shareholders. The NASDAQ prohibits payments in excess of the greater of 5% of the consolidated gross revenues or \$200,000 for any year within the past 3 fiscal years, while the NYSE prohibits thresholds of the greater of 2% or \$1 million. While the final exchange listing requirements are more stringent in that they include employees (as opposed to just partners or officers) the Act has a zero-tolerance policy with respect to **any** payments falling within the specified guidelines.

4-6. Distinctions Regarding Independence Pre- and Post-SOX

The distinctions between independence requirements in the pre- and post-SOX reporting environment can be categorized primarily in the same manner as discussed above: family relations, affiliations, fee payments for non-director services, stock ownership, exemptions from independence, and corporate business relationships.

Family Relations: The exchange listing requirements regarding family members were in effect prior to Section 301 and thus there are minimal distinctions of these rules pre- and post-SOX. The NYSE defines an "immediate family member" as it did previously in its 1999 rules. An "immediate family member" includes a person's spouse, parents, children, siblings, mothers and fathers-in-law, sons and daughters-in-law, brothers and sisters-in-law, and anyone (other than domestic employees) who shares such

person's home. The NYSE also notes that when applying the look-back provisions in Section 303A.02(b), listed companies need not consider individuals who are no longer immediate family members as a result of legal separation or divorce, or those who have died or become incapacitated.

The NASDAQ defines a "Family Member" to include a person's spouse, parents, children and siblings, whether by blood, marriage or adoption, or anyone residing in such person's home. This language is slightly different than the 1999 rules in that brother-in-laws and sister-in-laws are captured under this definition as opposed to being left out in the previous rules. In addition, the final rules included relations via adoption which were not specifically included before.

The Act is silent as to specifications regarding prohibited individuals with respect to family members likely due to the rules already in place regarding such by the exchanges. Therefore, the pre- and post-SOX climates are effectively the same regarding this issue.

Affiliations: As discussed earlier, although there is a safe harbor provision within the Act in the post-SOX climate regarding the assessment of whether a person falls within the category of an affiliate, there is effectively no difference from the pre-SOX climate because the Act does not intend for this definition to automatically preclude someone that falls outside of the provision (as long as the individual is not an executive officer).

In the pre-SOX climate the exchanges prohibited individuals such as current and former employees (within the past 3 years) and immediate family members of executives. In the post-SOX climate, both exchanges prohibit current partners or employees (or

directors with immediate family members who are current partners or employees) of the company's external auditor while the NYSE also includes the company's internal auditor within their prohibition. Thus, the rules regarding affiliation in the post-SOX climate are much more stringent.

Further, in the post-SOX climate, the Act specifically defines "affiliated persons" and the term "control." "Affiliates" is defined to include general partners and managing members and "control" is defined more broadly as "the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise."⁴³ Hence, the post-SOX climate is more stringent in that it has a broader scope with respect to affiliated relationships.

Fee Payments for Non-Director Services: Prior to SOX, the NYSE simply left the judgment regarding whether a director's business relationship with a firm interferes with a director's independence up to the BOD whereas the NASDAQ specified a monetary threshold (\$60,000) for such purposes. Post-SOX, the NYSE established a monetary threshold of \$100,000 while the NASDAQ threshold remained the same.⁴⁴

However, in the post-SOX climate, the Act specifies a "zero-tolerance" policy with respect to fee payments to ACs other than those fees paid within the AC's capacity as a member of the audit committee, the BOD, or any other board committee. In this case, the post-SOX climate is more stringent regarding fee payments.

⁴³ See Rule 10A-3(e)(4).

⁴⁴ As noted previously, the NASDAQ increased the threshold from \$60,000 to \$120,000 as of August 1, 2006. The NYSE also increased the threshold from \$100,000 to \$120,000 as of August 12, 2008.

Stock Ownership: As discussed earlier, prior to SOX and to the present date, both exchanges specify in their respective Listing Standards that ownership of company stock by itself would not preclude a board finding of independence and that ownership of even a significant amount of stock, by itself, is not a bar to an independence finding.

In addition, the Act does not specifically address stock ownership by ACs other than within the safe-harbor provisions contained within the definition of an affiliated person discussed above. In summary, there is no effective distinction regarding stock ownership between the pre- and post-SOX periods.

Exemptions from Independence: In the pre-SOX climate, the NASDAQ specifically allows for exemptions to be made regarding independence of ACs subject to the determination of the BOD under “exceptional and limited circumstances” while the NYSE allows for exemptions to be made regarding independence of directors in general.

In the post-SOX climate, the Act allows for exemptions to the independence standard only as the SEC determines appropriate in light of the circumstances. Thus, the post-SOX climate is more stringent in that the Act removes the ability of BOD to make exemptions regarding independence for those directors that serve on the audit committee.

Corporate Business Relationships: In the pre-SOX climate, the NYSE did not have any specific rules regarding inter-company relations while the NASDAQ had established threshold requirements regarding payments to or from the company and certain organizations of directors that received at least \$200,000 in any of the last 3 years.

In the post-SOX climate, both exchanges have established threshold requirements regarding payments to or from the company and certain organizations that a director is a current employee (or an immediate family member is an executive officer). The

NASDAQ extends this concept to controlling shareholders. The NASDAQ prohibits payments in excess of the greater of 5% of the consolidated gross revenues or \$200,000 for any year within the past 3 fiscal years, while the NYSE prohibits thresholds of the greater of 2% or \$1 million.

Further, in the post-SOX climate, the Act includes in its definition of “indirect acceptance” by a member of any consulting, advisory or other compensatory fee, acceptance by any entity that the member is a partner or officer of and that provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary. The post-SOX climate is more stringent in that the final exchange listing requirements include employees (as opposed to just partners or officers) and that the Act has a zero-tolerance policy with respect to any payments falling within the specified guidelines.

CHAPTER 3: LITERATURE REVIEW

In this chapter, I first discuss prior research that examines the association between audit committee characteristics and financial reporting quality. I then discuss research regarding audit committee compensation and stockholdings. Lastly, consistent with audit committees being but one facet of the corporate monitoring environment, I discuss prior research regarding other monitoring mechanisms in the corporate monitoring framework.

1. Audit Committee Characteristics and Financial Reporting Quality

There has been a long-term widespread emphasis on the importance of audit committees within firms' overall financial reporting structure driven by the belief that audit committees strengthen financial reporting quality and minimize the potential for fraud. Consistent with this emphasis, I discuss prior research in this section that examines audit committee characteristics and various measures of financial reporting quality.

McMullen and Raghunandan (1996) survey 51 companies with financial reporting problems (i.e., SEC enforcement actions and / or material restatements of quarterly earnings) regarding their audit committee composition and characteristics within the four-year period before 1989. They compare the results with that of 77 companies with no such problems to explore differences between the audit committees in each group. They find that only 67% of problem companies have audit committees consisting solely of outside directors in contrast to 87% of the problem-free companies. McMullen and

Raghunandan (1996) also find that only 6% of problem firms have a CPA on the audit committee in contrast to 25% of the no-problem companies. They also document that only 23% of problem firms had regularly scheduled audit committee meetings three or more times a year in contrast to 40% of the problem-free firms. They suggest that companies can enhance financial reporting quality by restructuring their audit committees with respect to these characteristics.

Klein (2002) examines whether audit committee and board characteristics are related to earnings management. Using a sample of 692 publicly-traded U.S. firm years derived from an initial S&P 500 sample from 1992-1993, she examines whether the magnitude of abnormal accruals is related to audit committee independence. Her results document that the magnitude of abnormal accruals is more pronounced for firms with committees comprised of less than a majority of independent directors. Klein (2002) also provides evidence of a significantly negative association between absolute abnormal accruals and the percentage of outside directors on the audit committee. The same results arise with respect to the percentage of outside directors on the board as well. She also documents that firms that change their boards and / or audit committees from majority-independent to minority-independent have significantly larger increases in the magnitude of abnormal accruals relative to those firms that do not experience such changes. Klein (2002) results suggest that earnings management is negatively related to independent boards and audit committees but she does not rule out that her results can also simply be a reflection of a period of increasing uncertainty.

Abbott, Parker and Peters (2004) examine 88 annual restatements not resulting from fraud for the period 1991-1999. Using a matched-pairs control group of firms based

on size, exchange-listing, industry, and auditor type, they find a significantly negative association between audit committee diligence (i.e., independence and activity level) and the occurrence of restatements. They also provide evidence of a significantly negative association between committees that include at least one member with financial expertise and restatements. Abbott et al. (2004) also document similar results when they examine a sample of 44 fraud and no-fraud firms. They conclude that their results support the recommendations by the Blue Ribbon Committee regarding strengthening the monitoring and oversight role that audit committees play in financial reporting (BRC 1999).

Bedard and Johnstone (2004) investigate auditors' assessments of earnings manipulation risk and corporate governance risk, and their planning and pricing decisions with respect to the identification of such risks. They measure earnings manipulation risk (corporate governance risk) as the number of high-risk responses to "yes / no" questions relating to 9 earnings manipulation risk factors (11 board of director and audit committee risk factors) consistent with factors used in comparable studies. Using 1,000 client continuance risk assessments made by engagement partners of public accounting firms in 2000-2001, they find a positive association between the identification of clients with earnings manipulation risk and planned increased effort and billing rates. They also document that this association is greater for those clients identified as having heightened corporate governance risk. Bedard and Johnstone (2004) conclude that their analysis suggests that auditors consider aggressive management and adequacy of corporate governance in their planning and pricing decisions.

Collectively, these studies all take place in pre-SOX settings and suggest a negative association between audit committee independence and various measures of

financial reporting quality. In contrast, other research (Beasley 1996; Lin, Li and Yang 2006) finds no association between the presence of an audit committee or audit committee independence and financial reporting quality. The following studies also conduct their analyses in a pre-SOX environment.

Beasley (1996) examines whether the percentage of outside members on the board is associated with the likelihood of financial statement fraud. He constructs a matched-pairs sample of 75 fraud and 75 no-fraud firms based on size, industry, national exchange-listing, and time period for the period 1980-1991. He documents that no-fraud firms have boards with significantly higher proportions of outside members relative to fraud firms. While Beasley (1996) focuses on board characteristics as opposed to audit committee characteristics, he does document that the presence of an audit committee does not significantly affect the likelihood of fraud. He also provides evidence that the likelihood of financial statement fraud decreases with respect to the joint occurrence of an increase in outside director ownership and tenure in conjunction with a decrease in the number of directorships in other firms held by outside directors. His results suggest that the inclusion of outside members on the board increases the board's effectiveness of monitoring management and preventing financial statement fraud. Further, Beasley (1996) concludes that board composition as opposed to mere presence of an audit committee is more important in reducing the likelihood of fraud. His results also suggest that increasing outside director ownership potentially decreases the likelihood of financial statement fraud.

Lin et al. (2006) examine the association between audit committee characteristics (size, independence, financial expertise, activity, and stock ownership) and earnings

management (earnings restatements). Using a sample of 212 public U.S. firms that restated their reported earnings for the fiscal year 2000, they document a significantly negative association between audit committee size and the occurrence of earnings restatements. However, they find no significant association between other audit committee characteristics in their study (i.e., independence, financial expertise, activity, and stock ownership) and the occurrence of earnings restatements. Lin et al. (2006) conclude that a larger audit committee may provide more oversight over the financial reporting process and that such oversight seems to improve earnings quality by reducing the probability of restating financial statements after their original filings with the SEC.

2. Audit Committee Compensation and Stockholdings

While prior research exists regarding audit committee characteristics as described above, there is little empirical research that specifically includes audit committee stock ownership and/or compensation in their analyses. The following studies conduct their investigations using samples derived prior to SOX. For example, Carcello and Neal (2003) include AC's ownership in their examination of the role of the audit committee with respect to auditor dismissals following new going-concern reports issued by Big 6 firms between 1988 and 1999. They claim that audit committees which are more independent, have greater financial expertise and governance expertise, and own less stock within their sample will be more able to retain an auditor after a going concern report is issued despite management's desire to dismiss the auditor as a means of punishment for issuing the report. The assumption being that the greater the AC's objectivity and expertise (i.e., financial and/or governance) the less likely management

will be able to influence their actions and the more likely the AC's interests resemble shareholders' interests.

Carcello and Neal (2003) find that the higher the percentage of affiliated directors on the audit committee, the higher the probability that a client will dismiss the auditor following the receipt of a going-concern report. They also find a positive (negative) association between this probability and AC's stock ownership (AC's governance expertise. Further, they find no significant relation between AC's financial expertise and auditor dismissals following going-concern opinions. The results suggest that AC's ownership biases their decision to retain an auditor most likely due to the negative effects on stock price from auditor decisions to issue going concern reports.

Bedard, Chtourou and Courteau (2004) examine a sample of 300 U.S. firms in 1996 categorized into three groups based on differing levels of earnings management (aggressive income-increasing, aggressive income-decreasing, and low levels of earnings management). They use abnormal accruals via a cross-sectional Jones (1991) model to measure earnings management. Bedard et al. (2004) document a negative association between aggressive earnings management and audit committee characteristics such as financial and governance expertise, 100% independence (i.e., not related to firm management and whether they participate in company's stock option plans), and the presence of a clear mandate defining the committee's responsibilities. They also find that as the proportion of stock options that can be exercised in the short-run increases relative to the total of options and stocks held by ACs, the likelihood of aggressive earnings management increases as well. Their results suggest that audit committees with members having more financial and governance expertise are more effective in constraining

aggressive earnings management. Their results also suggest that including stock options within AC's remuneration may be less than optimal.

Yang and Krishnan (2005) examine the association between seven audit committee characteristics and two different measures of earnings management, total discretionary accruals (Jones 1991), and current discretionary accruals (Teoh, Wong and Rao 1998) using a sample of 896 firm-year observations for the years 1996–2000. They document a negative association between AC's governance expertise (i.e., the number of outside directorships) and quarterly earnings management. They also find a negative association between the average tenure of ACs and quarterly earnings management. Yang and Krishnan (2005) also find a significantly positive association between stock ownership by ACs and earnings management. Consistent with Bedard et al. (2004), their results suggest that ACs having greater governance expertise are more effective in constraining aggressive earnings management likely due to their desire to maintain their reputations or their expertise in dealing with financial reporting issues. Their results also suggest that AC's tenure provides possible positive effects derived from experience with the firm and its accounting. Lastly, Yang and Krishnan's (2005) results suggest that stock ownership by ACs is undesirable.

Lin et al. (2006) use a matched sample of 212 firms for the fiscal year 2000 in their examination of the association between the incidence of earnings restatements and audit committee characteristics (including stock ownership). They find no association between AC's ownership and the incidence of earnings restatements. However, they do document a negative association between audit committee size and the incidence of earnings restatements.

Magilke, Mayhew and Pike (2007) conduct an experimental study and find that ACs with no stock-like compensation are the most objective. Their study suggests that stock-like compensation can impact AC's preferences for biased financial reporting. They note that there is little research that examines the influence of stock based compensation on member preferences for biased financial reporting. Magilke's et al. (2007) findings suggest that AC's ownership potentially contributes to financial reporting bias.

Archambeault, DeZoort and Hermanson (2008) examine the association between AC's incentive-based compensation and accounting restatements due to error or fraud using a matched sample logistic regression of 153 restatement and 153 non-restatement firms from 1999 to 2002. Consistent with their hypotheses, they find a significant positive relation between short-term stock option grants for ACs and the likelihood of restatements. They also find a marginally significant association (i.e., $p < 0.10$) between long-term stock option grants for ACs and the likelihood of restatements. However, they find insignificant results when they examine AC's ownership.

Thus, the results are mixed. While prior research (Carcello and Neal 2003; Bedard et al. 2004; Yang and Krishnan 2005; Magilke et al. 2007; Archambeault et al. 2008) provides evidence of a positive relationship between AC's ownership / compensation and financial reporting subjectivity (i.e., auditor dismissals, earnings management, biased financial reporting and accounting restatements), other research (Lin et al. 2006; Archambeault et al. 2008) finds no association between AC's ownership and earnings restatements.

3. Other Mechanisms in the Corporate Monitoring Framework

Prior research suggests various monitoring mechanisms play an active role in corporate monitoring. The underlying theory for the development of my hypotheses also lies in prior research that examines the interaction among mechanisms to control agency problems that may have an impact on AC's ownership. I discuss two such mechanisms: auditor type and institutional ownership.

Prior research suggests a distinction of audit quality between that of Big N auditors versus non-Big N. DeAngelo (1981) describes the audit-client relationship as a bilateral monopoly that creates an incentive for auditors to compromise their independence and report favorably in order to retain clients (economic dependence). However, the larger the portfolio of clients the less financial dependence on a single client and therefore larger client portfolios will mitigate such dependence. Essentially, large auditors are unlikely to report favorably for one particular client because the potential costs associated with a tarnished reputation and loss of other clients far outweigh the potential benefits of doing so. Hence, DeAngelo concludes audit firm size is a proxy for independence and audit quality since larger firms have larger client portfolios than smaller firms (this is where the Big N/non-Big N distinction is founded).

Reynolds and Francis (2001) examine the tradeoff between economic dependence and reputation protection; and how it affects auditor decision-making in local offices. They extend DeAngelo (1981) by examining auditor incentives within individual practice offices of Big 5 firms. Reynolds and Francis (2001) argue that a single client can be very important and represent a large portion of office-level revenues. The individual office is also the decision-making unit of the firm in which auditors contract with clients,

administer audits, and issue audit reports. Hence, they reason that the office is the most appropriate unit of analysis for measuring economic dependence and the potential effect on auditor reporting decisions.

The office-level analysis should be a more powerful test of economic dependence. However, Reynolds and Francis (2001) do not find evidence that economic dependence causes auditors to be lenient and report more favorably for larger clients. Barring any errors, the findings support the claim that incentives with respect to reputation protection and litigation avoidance are sufficient to over-ride the possible impairment of objectivity by economic dependence inherent in auditor-client contracting. They provide evidence that suggests, for a sub-sample of financially distressed clients, larger clients in offices are more likely to receive going concern opinions. They also document that relatively larger clients in offices have smaller accruals which implies less discretion to manage earnings. Overall, Reynolds and Francis (2001) conclude that Big 5 auditors appear to report more conservatively for larger clients, suggesting that reputation protection dominates auditor behavior.

Shleifer and Vishny (1986) examine the role of large shareholders in corporate control using a sample of 456 of the Fortune 500 firms over the period 1980 – 1984. They argue that large shareholders, due to their ownership stake, monitor managers and seek ways to better the firm which ultimately may result in initiating a hostile takeover or inviting third parties to do so. Large shareholders in their study consist of families, pension and profit-sharing plans, banks, insurance companies, and investment funds.

Their analysis focuses on cash tender offers made by large minority shareholders to replace inefficient management. Their evidence suggests that equity ownership by

large unaffiliated block-holders (i.e., independent from management) helps facilitate hostile takeovers by playing an important third-party role. Large shareholders appear to act as a disciplinary monitoring mechanism when the board of directors fails to ratify management's non-value-maximizing actions. Shleifer and Vishny (1986) provide evidence consistent with their argument that large shareholders have a strong incentive to monitor managers because of their significant economic stakes.

Agrawal and Mandelker (1990) examine the role of large shareholders in monitoring managers when managers propose antitakeover charter amendments. They note that monitoring of managers is especially important under such circumstances because antitakeover amendments are subject to shareholders' approval. While these amendments raise barriers against takeovers whereby increasing the required premium for a successful acquisition creating a positive effect on stockholders' wealth, they also reduce the likelihood of bids for the firm whereby creating a negative effect on stockholders' wealth.

Using data on the percentage ownership by each of the five largest institutional owners of 302 sample firms, Agrawal and Mandelker (1990) predict a positive relation between stock price reactions to announcements of antitakeover proposals and institutional ownership. They find a significantly positive relation between changes in shareholders' wealth around antitakeover proposal announcements and the proportion of equity owned by institutions. The one-third of the sample firms with the lowest institutional ownership suffers a statistically significant loss of 6.4 percent of their wealth, while the shareholders' wealth of the remaining firms incurs no significant change. Agrawal and Mandelker (1990) conclude that their evidence suggests that the

stock market reaction to antitakeover proposals is more favorable the larger the institutional ownership.

Agrawal and Mandelker (1990) further discuss that the incentives of managers proposing antitakeover amendments are likely partially anticipated by investors because institutional ownership is observable. In this manner, the monitoring effect by institutional owners is likely already reflected, in part, in stock prices. Their evidence is consistent with Shleifer and Vishny (1986) argument that the existence of institutional ownership leads to better monitoring of managers.

Jensen (1993) discusses the parallels of the mid-twentieth century technological, political, regulatory, and economic forces changing the worldwide economy with the changes experienced during the nineteenth century industrial revolution. He discusses the failure of corporate internal control systems to deal effectively with these changes. He describes a major set of problems with internal control systems are associated with the curbing of what he calls active investors. Jensen (1993) defines active investors as individuals or institutions that simultaneously hold large debt and/or equity positions in a company and actively participate in its strategic direction.

Jensen (1993) describes financial institutions such as banks, pension funds, insurance companies, mutual funds and money managers as natural active investors. He further describes active investors as important to a well-functioning governance system because they have the financial interest and independence to view firm management and policies in an unbiased way. The arguments posed by Jensen (1993) are consistent with that of Shleifer and Vishny (1986).

Ajinkya, Bhojraj and Sengupta (2005) investigate the association between governance proxies (i.e., outside directors and institutional investors) and voluntary disclosure. They proxy for voluntary disclosure by using a sample of properties of management earnings forecasts (i.e., occurrence, frequency, specificity, accuracy, and bias) spanning from 1997 to 2002. They find that both institutional ownership and/or the proportion of outside directors are positively associated with the likelihood of forecast occurrence and frequency of forecast issuance. They further note that the forecasts are also more specific and accurate.

The results are consistent with increased institutional ownership providing greater transparency. In addition, they find that these mechanisms are negatively associated with managerial optimism. Ajinkya et al. (2005) document that firms with both greater institutional ownership and/or percentage of outside directors are likely to issue less optimistically biased (i.e., more conservative) forecasts. They conclude, in part, that promoting stronger governance (i.e., greater institutional ownership and/or increased representation of outside directors on the board) could also promote transparent disclosure. This study is relevant to my analysis in that it lends support for using institutional ownership as a proxy for external monitoring.

4. Chapter Summary

Thus, motivated by the importance of audit committees with respect to firms' financial reporting and their potential for maintaining firms' financial reporting integrity, prior research has examined audit committee characteristics and various measures of financial reporting quality. All but one of the studies discussed above take place in pre-SOX settings and while many provide evidence of a negative association between various

financial reporting quality constructs, some fail to find such an association. While prior research focuses on audit committee characteristics, very few studies examine audit committee ownership of the firms that they are charged with monitoring. Studies that do examine audit committee ownership provide mixed results as well in that some provide evidence of a positive relationship between AC's ownership and financial reporting subjectivity (i.e., auditor dismissals, earnings management, biased financial reporting and accounting restatements) while some find no association between AC's ownership and earnings restatements.

CHAPTER 4: HYPOTHESES DEVELOPMENT

I first discuss agency theory and signaling theory leading to the development of my initial hypothesis regarding the differential relation between independent directors' monitoring roles and their respective ownership. My second hypothesis focuses on the impact that Section 301 may have on this relation. The development of my last two hypotheses discusses prior research that suggests other monitoring mechanisms may also impact this relation.

Independent Directors' Monitoring Roles and Their Respective Ownership: The development of my first hypothesis focuses on the notion that despite the fact that directors are encouraged to own stock as a means of more closely aligning their interests with that of outside shareholders, recent research suggests that ACs and NACs have differing incentives with respect to their differing monitoring functions and that the signal that they send via stock ownership differs as well.

Fama and Jensen (1983) argue that directors invest their time, effort and money to develop knowledge, expertise and/or talent in the pursuit of maintaining their current board positions, gaining additional board positions, and developing prestige, networking and learning opportunities. As these costs that directors must bear increase, the likelihood of director shirking increases as well contributing to the basic moral hazard conflict.

Fama and Jensen (1983) argue that while reputation penalties such as dismissal from their

current board position and/or loss of other board positions in the market are a strong mechanism for reducing moral hazard problems, the threat of such penalties are not able to entirely eliminate director shirking. They argue that director shirking can be mitigated by aligning directors' incentives with that of shareholders and that stock ownership by directors in their respective companies more closely achieves this alignment.

Thus, Fama and Jensen (1983) argue that directors' monitoring efforts are credible when their wealth resides in and is dependent upon the value of the stock of the firm that they are charged with monitoring. This notion is widely held in the business world as is evidenced by corporate stock ownership guidelines that encourage or require directors to hold stock in the companies that they are charged with monitoring because stock ownership by directors more closely aligns their interests with that of outside shareholders. In this manner, stock ownership by directors serves as an *ex ante* signal of their alignment with outside shareholder interests.

Signaling theory (Spence 1973; Leland and Pyle 1977; Datar, Feltham and Hughes 1991) tells us that an effective signal is derived from a set of choices that are both observable and costly to imitate by poor-quality signalers. In the context of a director, a signal (e.g., a higher level of stockholdings) is an action taken by a high-quality director that would not be rational (e.g., the action would be too costly) for a low-quality director to mimic. A high-quality director is better able to bear the risk of holding a greater portion of his or her wealth in the stock of the firm that he or she is charged with monitoring because their actions have a greater likelihood of maximizing firm value relative to that of a low-quality director. The high-quality directors' willingness to retain

a greater proportion of equity relative to that of a low-quality director acts as a signal to the market of the directors' superior monitoring abilities.

As discussed above, agency theory assumes that directors' incentives are constant across the board and that directors' stock ownership more closely aligns their interests with that of outside shareholders. However, agency theory does not consider the potential for directors' incentives to differ and that their stock ownership may have differential effects on their alignment with shareholder interests with respect to their differing monitoring roles. Following, I discuss recent research that suggests that independent directors' incentives differ with respect to their monitoring role (ACs relative to NACs).

Audit committees have faced great scrutiny over time with regards to independence. "One of the most common variables in the audit committee composition literature is member independence" (DeZoort, Hermanson, Archambeault and Reed 2002: 45). Such scrutiny stems from the view that "independent and tough-minded audit committees represent the most reliable guardians of the public interest" as evidenced by SEC Chairman Arthur Levitt's famous 1998 speech entitled 'The Numbers Game' at NYU (Levitt 1998). As further evidenced by NYSE/NASDAQ listing standards over time (and most recently due to regulatory changes resulting from Section 301), audit committee directors have always been distinguished from the remainder of the board with respect to regulatory independence considerations due to their direct responsibility for monitoring managerial financial reporting.

Cohen et al. (2002) document results suggesting ACs are distinguished from NACs. They find that Big N auditors view management as the primary driver of corporate monitoring and that ACs are typically ineffective and lack sufficient power to

be a strong monitoring mechanism. Cohen et al. (2002) document that unless management allows itself to be monitored the substance of such activities will be subverted. They interview experienced Big N auditors and reveal that management has a significant influence over monitoring parties. Auditors in their study argue that if management does not want to be “governed”, they can’t be. Management may place passive, compliant members on the board that may satisfy regulatory requirements but are reluctant to challenge management. Cohen et al. (2002) document that Big N auditors view audit committees as less significant relative to the rest of the board of directors and/or senior management. Their evidence suggests that auditors distinguish ACs from the rest of the board.

Consistent with the notion that ACs are distinguished from the remainder of the board, Srinivasan (2005) provides direct evidence that a positive association exists between the market imposition of reputational penalties on outside directors (i.e., only those directors that have no known relationship with the company other than their director role) and their responsibility for directly monitoring managerial financial reporting. Specifically, the market for director labor penalizes ACs to a greater extent (i.e., dismissal from current board position and loss of additional board positions) than NACs when earnings restatements occur. This distinction and comparison is important as “Non-audit committee directors provide a powerful matched sample because they belong to the same company but are not directly responsible for financial reporting” (Srinivasan 2005: 293).

Holding a zero-tolerance policy with respect to director independence constant in a pre-SOX environment as Srinivasan (2005) does, the findings suggest that the signal

regarding a director's independence is associated with whether the director resides on the audit committee or not. The evidence suggests that in order to avoid penalties when earnings restatements occur it is simply not enough for ACs to just maintain no known relationship with the company other than their director role. While competency likely has an association with the imposition of reputational penalties, Srinivasan (2005) controls for director financial expertise as defined under SEC "Standards Relating to Listed Company Audit Committees" (SEC 2003) to examine whether the reputation penalty varies for financial expert ACs finding no significant association.

Thus, Srinivasan's (2005) evidence suggests that due to their direct responsibility for monitoring managerial financial reporting, independent ACs have different incentives than independent NACs to signal their relative independence. While I am unaware of any study that specifically examines whether ACs (or directors in general) seek to signal their relative independence, it is a reasonable assumption given recent research that documents firms exhibit a trend toward increasing independence of boards prior to SOX consistent with their acknowledgement of the demand for independent directors (Linck, Netter and Yang 2008; Linck, Netter and Yang 2009).

As discussed earlier, Fama and Jensen (1983) do not consider the potential for directors' stock ownership to have differential effects on their alignment with shareholder interests with respect to their differing monitoring roles (i.e., whether the director is directly responsible for the firm's financial reporting). This distinction is important in light of recent research that raises concerns regarding the inherent conflict of interest in the ability of ACs to hold stock of the companies they are charged with monitoring (Barrier 2002). Within the Barrier (2002) study, Dana Hermanson discusses the irony in

that auditors are barred from owning stock in the companies they monitor while ACs can own all the stock they wish. Similarly, Todd Dezoort raises concerns regarding the ability for ACs to own stock despite their potential ability to take actions that influence stock prices while Charles Elson focuses on the potential positive association between AC's stock ownership and their sensitivity to stock price declines.⁴⁵

Consistent with such concerns, recent research findings suggest AC's stock ownership is associated with greater potential for bias within the financial reporting process (the occurrence of auditor dismissal, Carcello and Neal 2003; earnings management, Yang and Krishnan 2005). While ACs that maintain no relationship with a firm other than in their capacity as a director send a signal to the market for director labor consistent with regulatory concerns regarding independence in appearance, recent research suggests that AC's ownership may undermine this signal and contribute to a perceived degradation of independence in fact.

Thus, director ownership is associated with differential impacts on director alignment with shareholder interests and differential signals with respect to the monitoring function the director plays. I argue that a publicly observable way that independent ACs can *ex ante* signal their acknowledgement of the inherent tension that arises from owning stock in the companies that they are charged with monitoring is via that which recent research suggests creates the apparent tension, ownership.

Consistent with these notions, I argue that if ACs are concerned with effectively *ex ante* signaling to the market their objectivity they would likely do so by holding lower

⁴⁵ At the time of the article, Dana Hermanson was the director of research of the Corporate Governance Center at Kennesaw State University in Georgia, Todd DeZoort was the director of the Ph.D. program in accounting at the Culverhouse School of Accounting at the University of Alabama and Charles Elson was the director of the Center for Corporate Governance at the University of Delaware.

levels of stock than that of NACs. Thus, I argue that there is a differential association between independent directors' monitoring functions and their respective ownership and propose the following hypothesis:

H1: The monitoring role of an AC is negatively associated with their ownership.

Evidence of a significant differential association (no matter the direction) is consistent with the notion of a differential association between a director's monitoring role and their respective ownership. Results consistent with my hypotheses suggest that regulatory preclusion of ownership from director independence considerations and homogeneous prescriptions for independent directors within firms stock ownership guidelines may be less than optimal.

The Potential Impact of SOX: Section 301 requires each AC to be independent as determined by two broad criteria; financial and affiliation. Congress concludes that ACs that accept any consulting, advisory or other compensatory fee (other than in the member's capacity as a member of the board of directors and any board committee) or are an affiliated person of the issuer or any subsidiary of the issuer (apart from his or her capacity as a member of the board and any board committee) increases the appearance of lack of independence and hence, potentially threatens investor confidence in the reliability of corporate financial information.

Thus, the post-SOX regulatory environment relies upon essentially a zero-tolerance policy with respect to AC independence (i.e., only ACs having no known

relationship with the company other than their director role are deemed independent). Despite the increased scrutiny of AC independence over time regulators have always specifically precluded ownership from independence considerations and still do despite recent research that suggests AC's ownership is associated with financial reporting bias.

Signaling theory tells us that for a signal to be effective, it must be derived from a set of choices (Spence 1973). Section 301's uniform standards and the resulting more stringent post-SOX climate are likely to mitigate AC's ability to *ex ante* signal to the market their differing independence because AC's set of available choices has effectively decreased. Despite SOX, ACs can still signal independence differences via their level of shareholdings and thus to the extent that AC's ownership serves as a proxy for objectivity, it is likely that the current uniform AC independence rules mandated by Section 301 impact the association between AC's monitoring role and their respective ownership.

Given my hypothesized negative association between the monitoring role of an AC and their respective ownership in H1, I argue that this association is likely to be stronger in the post-SOX regulatory environment and propose the following hypothesis:

H2: ACs' monitoring role is more negatively associated with their respective ownership in the post-SOX period.

Evidence supporting my hypothesis suggests that, *ceteris paribus*, the impact that the monitoring role that an AC plays on their respective ownership is more important

post-SOX relative to pre-SOX. This may or may not be consistent with maintaining regulatory preclusion of ownership with respect to AC independence considerations.

Conversely, it may be that Section 301 potentially contributes to increased AC's ownership. As discussed earlier, the post-SOX environment has a zero-tolerance policy regarding AC independence. This setting may provide independent directors serving as ACs with the initiative to increase ownership without the potential perception of tarnished independence despite the inherent tension in their owning stock of the firm that they are charged with monitoring because of their compliance with Section 301.

Alternatively, it may be that there is no differential impact on the association between AC's monitoring role and their ownership pre- versus post-SOX to the extent that firms sought to comply with AC independence requirements ahead of mandatory Section 301 statutory compliance. Lack of a differential post-SOX association is consistent with documented evidence of firms exhibiting a trend toward increasing independence of boards prior to SOX consistent with their acknowledgement of the demand for independent directors (Linck et al. 2008; Linck et al. 2009).

The Impact of Other Monitoring Mechanisms: Consistent with prior research that suggests various monitoring mechanisms play an active role in corporate monitoring, I expect the hypothesized negative association between AC's monitoring function and their respective ownership to be affected by other independent monitoring mechanisms.

Prior research suggests a distinction regarding greater independence and audit quality for Big N relative to non-Big N auditors (DeAngelo 1981). Consistent with prior research, I argue that firms with Big N auditors provides a setting in which the tension inherent in the ability of ACs to hold stock in the company that they are charged with

monitoring is potentially relieved. Thus, I expect the presence of a Big N auditor to moderate or lessen the hypothesized negative association between AC's ownership and their monitoring role.

Conversely, the tension inherent in the ability of ACs to hold stock in the company that they are charged with monitoring is potentially most prevalent in non-Big N settings. Thus, in non-Big N settings, I expect the presence of a non-Big N auditor to reverse the hypothesized negative association between AC's ownership and their monitoring role.

I propose the following hypothesis:

H3: ACs' monitoring role in Big N auditor settings has a positive association with their respective ownership.

Evidence supporting H3 is consistent with AC's objectivity with respect to their audit function role being less important when firms have Big N auditors. A positive association is consistent with ACs having less concern about the inherent tension in the ability for them to own stock in the firms that they are charged with monitoring because of the greater perceived independence and monitoring quality provided by Big N relative to non-Big N auditors. In addition, hypothesized results are also consistent with AC's viewing themselves and Big N auditors as potentially serving as substitute independent monitoring mechanisms to some degree.

Alternatively, negative results or lack of an association may be consistent with the evidence provided by Cohen et al. (2002) in that Big N auditors view audit committees as

less significant relative to the rest of the board of directors and/or senior management. Thus, Big N settings may have the opposite or no effect on the hypothesized association between the monitoring role of an AC and their respective ownership. Negative and/or no results may be reflective of ACs in Big N settings perceiving greater pressure to demonstrate their objectivity and/or consistent with ACs viewing themselves and Big N auditors as having minimal or no substitute independent monitoring effects perhaps from their perceived ineffectiveness by Big N auditors.

My analysis also considers institutional investors as a proxy for independent monitoring consistent with prior research findings that suggest that large shareholders have a strong incentive to monitor managers because of their significant economic stakes (Shleifer and Vishny 1986; Agrawal and Mandelker 1990; Jensen 1993). Additional research discussed here suggests that institutional ownership may affect other monitoring mechanisms.

In their study regarding boards of directors and substitution effects of alternative governance mechanisms, Rediker and Seth (1995) discuss the substitution effects between outside directors, block-holders, and incentives to insiders using eighty-one U.S. bank-holding companies. They argue that even though the overall effect of the bundle of mechanisms is efficient in aligning manager-shareholder interests, the impact of any one mechanism might be insufficient to achieve this alignment. Further, they argue and find evidence to suggest that different monitoring mechanisms may substitute for each other.

Rediker and Seth (1995) posit, in part, that in the presence of relatively large outside shareholders, the percentage of outside directors on the board represent a less important monitoring mechanism. They argue that there is a reduced need to have outside

directors on the board to provide the service of monitoring management when there are large outside shareholders. Rediker and Seth (1995) document strong substitution effects between monitoring by outside directors (the percentage of outside directors on the board) versus monitoring by large shareholders (the percentage of total outstanding common stock controlled by the five largest non-manager shareholders). Their results include a negative and significant association between outside directors on the board and large shareholders in their large size sub-sample but not in small firms.

Consistent with these notions, Rediker and Seth (1995) conclude that the presence of large outside shareholders serves as monitoring mechanisms that appear to substitute for monitoring by the board. As large shareholder ownership increases, there appears to be less of a need to ensure that outsiders are represented on the board. Their findings are consistent with prior research suggesting that large shareholders may substitute for independent monitoring by the board and that they have a strong incentive to monitor managers because of their significant economic stakes.

Using the presence of institutional investors as a proxy for independent monitoring, I argue similar to my previous hypothesis, that firms with greater institutional ownership provide a setting in which the tension inherent in the ability of ACs to hold stock in the company that they are charged with monitoring is potentially relieved. Thus, as institutional ownership increases, I expect it to moderate or lessen the hypothesized negative association between AC's monitoring role and their ownership and propose the following hypothesis:

H4: ACs' monitoring role in institutional ownership settings has a positive association with their respective ownership.

Results supporting H4 are consistent with AC's objectivity with respect to their audit function role being less important as institutional investor ownership increases. A positive association is consistent with ACs having less concern about the inherent tension in the ability for them to own stock in the firms that they are charged with monitoring because of the greater perceived independent monitoring function provided by institutional investors. In addition, hypothesized results are also consistent with AC's viewing themselves and institutional investors as potentially serving as substitute independent monitoring mechanisms to some degree.

Alternatively, negative results or lack of an association may be consistent with institutional ownership having the opposite or no effect on the hypothesized association between the monitoring role of an AC and their respective ownership. Negative and/or no results may be reflective of ACs in institutional ownership settings perceiving greater pressure to demonstrate their objectivity and/or consistent with ACs viewing themselves and institutional owners as having minimal or no substitute independent monitoring effects.

CHAPTER 5: SAMPLE, MODEL AND ESTIMATION APPROACH

I first discuss my sample. I then discuss the model I employ to estimate director ownership in order to test my hypotheses and lastly, I discuss my estimation approach.

1. Sample

My data consists of director observations of firms having annual meetings that occurred in the years 2000, 2001 (the pre-SOX sample period) and 2005, 2006, 2007 (the post-SOX sample period). Firm-level control variables are measured as of the end of the firm's fiscal period immediately preceding the annual meeting. Thus, my dataset resembles a broken, unbalanced panel.

I gather financial information from Compustat North America Industrial Annual database, stock return data from Center for Research in Security Prices, CEO information from Execucomp, business segment data from Compustat North America Segments database, director ownership information from RiskMetrics, institutional ownership information from ShareWorld, and auditor information from Audit Analytics.

My sample consists of fairly large firms. I define the pre-SOX period(s) as fiscal years 2000, 2001, and the post-SOX period(s) as 2005, 2006 and 2007. I exclude the years 2002, 2003 and 2004 because SOX became public law on July 30, 2002 with section 301 subsequently effective April 25, 2003 with listed issuers required to be in compliance by the earlier of (1) their first annual shareholders meeting after January 15, 2004, or (2) October 31, 2004. Table 2 presents the sample selection summary.

(Insert Table 2)

The final sample consists of 907 firm-year observations (4,487 director observations) in the pre-SOX sample period and 1,308 firm-year observations (8,004 director observations) in the post-SOX period for a total of 2,215 firm-year observations (12,491 director observations) in Panel A (Panel B). Panel B of Table 2 also provides a summary of the frequency of AC by meeting year.

2. Model

To examine my hypotheses, I incorporate the determinant model of officer and director ownership employed by Denis and Sarin (1999). In their analysis of board ownership structures, they examine 583 firms over the ten-year period 1983 – 1992 noting that “there is little formal theory underlying many of their tests” and that their “study is best viewed as exploratory data analysis” (p 188). They conclude that their “findings suggest that the determination of ownership and board structures is a more dynamic process than previously understood” (p 214). Borrowing from Denis and Sarin (1999) I use the following model to test my hypotheses: ⁴⁶

$$\begin{aligned} \text{DIR}\%_{i,t} = & \alpha_0 + \beta_1 \text{MVE}_{i,t} + \beta_2 \text{VAR}_{i,t} + \beta_3 \text{GROWTH}_{i,t} + \beta_4 \text{CEOTEN}_{i,t} + \\ & \beta_5 \text{SEG}_{i,t} + \beta_6 \% \text{IND}_{i,t} + \beta_7 \text{DIRTEN}_{i,t} + \beta_8 \text{AC}_{i,t} + \beta_9 301 + \beta_{10} \text{BIGN}_{i,t} + \beta_{11} \text{INST}\%_{i,t} \\ & + \beta_{12} \text{AC}_{i,t} * 301 + \beta_{13} \text{AC}_{i,t} * \text{BIGN}_{i,t} + \beta_{14} \text{AC}_{i,t} * \text{INST}\%_{i,t} + \varepsilon_{i,t} \end{aligned} \quad [1]$$

Where the following variables are found in the Denis and Sarin (1999) model:

⁴⁶ Denis and Sarin (1999) estimate officer and director ownership at the firm level. My study differs in that I examine ownership of independent directors at the director level distinguishing between those that reside on the audit committee (i.e., ACs) and those that do not (i.e., NACs) and thus, my sample consists of independent non-officer directors. Note: Denis and Sarin (1999) do not use abbreviations within their paper for the dependent and independent variables as I do here.

DIR% = percentage of a firm's aggregate common stock held by an independent director.⁴⁷

MVE = log of the market value of a firm's common equity.

VAR = the variance of a firm's stock returns over the firm's fiscal period.

GROWTH = the industry median market value of a firm divided by the book value of total assets.

CEOTEN = the tenure of the CEO of a firm.

SEG = the number of reported segments of a firm to control for the extent of diversification of a firm.

%IND = the percentage of independent outsiders on the board.

I include the following additional control variables that are not present in the Denis and Sarin (1999) model:

DIRTEN = the tenure of a director of a firm.

301 = an indicator variable equal to 1 for the post-SOX period and 0 otherwise.

BIGN = an indicator variable equal to 1 if a firm is audited by a Big N auditor and 0 otherwise.

INST% = the percentage of a firm's aggregate common stock held by institutional owners.

And in order to test my hypotheses, I include the following additional variables of interest:

⁴⁷ Alternatively, I use DIRMV = the market value of a firm's common stock held by a director with respect to closing stock price as of the annual meeting date as a dependent variable. Consistent with Rediker and Seth (1995), the dollar value of investment rather than the percentage of ownership may serve as an appropriate sensitivity measure because an equivalent percentage stake in a large firm amounts to a considerably greater investment, on average, than in a small firm.

H1: AC = a monitoring indicator variable equal to 1 if a director serves as an audit committee member and 0 otherwise.

H2: AC*301 = the interaction of AC with 301.

H3: AC*BIGN = the interaction of AC with BIGN.

H4: AC*INST% = the interaction of AC with INST%.

Consistent with my hypotheses development, I expect AC and AC*301 (AC*BIGN and AC*INST%) to be negative (positive) and significant. Table 3 presents the variable definitions.

(Insert Table 3)

Agrawal and Knoeber (1996) argue that the percentage of shares owned by officers and directors are less where the cost of such shareholding (i.e., holding an undiversified portfolio) is greater. They use firm size (proxied by book value of total assets) as an indicator of this cost. An equivalent percentage stake in a large firm amounts to a considerably greater investment, on average, than in a small firm. Thus, firm size (MVE) is expected to have a negative association with DIR%.⁴⁸

Agrawal and Knoeber (1996) use the standard deviation of stock returns as an indicator of the cost of holding an undiversified portfolio. Consistent with this notion, the risk or volatility of a director's wealth increases as the variance of a firm's stock returns increase. Assuming risk aversion implies that directors will likely maintain lower holdings as variance increases. Alternatively, the greater the variance of a firm's stock returns (i.e., risk), the greater the potential reward. Thus, allowing for directors varying

⁴⁸ When using DIRMV as a dependent variable, MVE is expected to have a positive association.

risk preferences, I do not predict the direction of the association between VAR and DIR%.

GROWTH is a proxy for the growth opportunities of a firm. Denis and Sarin (1999) posit that directors might make ownership decisions based on growth and expect a positive association with DIR%.

Agrawal and Knoeber (1996) discuss that longer serving CEO's are likely to hold more shares. CEO's have the ability to accumulate more shares as their tenure increases. As tenure increases, CEO's also get closer to retirement. Dechow and Sloan (1991) argue that CEO shareholdings are most important in the CEO's final years to provide incentives to offset the potential increased desire to shirk now that the CEO's career is coming to an end. Therefore, CEOTEN is expected to be positively associated with DIR%.

As SEG increases, the diversification of the firm increases as well indicating that the cost of holding an undiversified portfolio potentially decreases. Consistent with Agrawal and Knoeber (1996) argument that the percentage of shares owned by officers and directors are less where the cost of holding an undiversified portfolio is greater, SEG is expected to be positively associated with DIR%.

Denis and Sarin (1999) find that changes in the ownership of officers and directors are negatively associated with changes in the percentage of outsiders on the board and thus, %IND is expected to be negatively associated with DIR%.

I also include director tenure (DIRTEN) because as tenure increases, directors are likely to have the ability to accumulate more shares over time. Further, controlling for director tenure likely mitigates any potential estimation issues associated with company stock ownership guidelines because as tenure increases, directors are also likely to own

more shares due to ownership guidelines. Thus, DIRTEN is expected to be positively associated with DIR%.

While I make formal hypotheses regarding the association of my interaction terms (AC*301, AC*BIGN and AC*INST%) with DIR%, I make no specific predictions regarding the association of 301, BIGN and INST% with DIR%. Their inclusion in my model helps to control for the main effects of these constructs to assess the impacts of their interaction with AC.

3. Estimation Approach

I employ a generalized estimating equations approach as proposed by Liang and Zeger (1986) to conduct my analyses. I do so because while I assume that director observations from a particular firm are independent of director observations from other firms, it is unrealistic to assume that director observations belonging to the same firm are uncorrelated with one another given the nature of my dataset. There are several factors that contribute to this correlation or clustering effect within my dataset.

Independent directors within my sample that belong to the same firm are subject to the same ownership guidelines and vesting requirements. As discussed previously, firms' ownership guidelines and policies with respect to the vesting of ownership for directors bias my analyses against finding support for my hypotheses because within firms, non-officer directors (of which my sample of independent directors are a sub-sample of) are held to the same standard of ownership guidelines and vesting requirements.

Another factor that affects my analyses resides in estimating director's ownership of their respective firm at the director-level. Equation [1] uses firm-level control variables

in a director-level regression. Thus, firm-level control variables will be repeated in my dataset within a particular time period for each director that belongs to the same firm.

Clustering effects typically cause standard errors to be understated because the number of independent observations is not equal to the number of directors and therefore bias in favor of finding significant results. I correct for clustering effects using generalized estimating equations with firm-clustered robust standard errors. I also specify an exchangeable working correlation matrix which not only tends to produce larger standard errors relative to an independent matrix specification but is also consistent with the assumption that the firm membership effect for director observations belonging to the same firm is similar.

CHAPTER 6: DESCRIPTIVE STATISTICS, RESULTS AND SENSITIVITY

1. Descriptive Statistics

Table 4 presents descriptive statistics of firm-level sample characteristics.

(Insert Table 4)

Panel A reveals that my full sample consists of large firms with significant institutional ownership presence. Further, my sample firms' boards of directors consist of approximately a two-thirds majority of independent directors. Not represented in Panel A is the fact that 2,125 of the 2,215 sample firms (approximately 96%) have BigN auditors. I discuss this in my sensitivity section below.

Panel B compares my sample firm characteristics between the pre- and post-SOX periods. One can see a significant increase among the sample firms institutional ownership presence (INST%) from pre- to post-SOX as well as a significant increase in firms' number of business segments. Consistent with what one would expect, there is a significant increase in the percentage of independent directors represented on firms' board of directors (%IND) from pre- to post-SOX.

Panel B also shows that the mean size (MVE) of the sample firms and the tenure of firms' CEOs (CEOTEN) are not significantly different from pre- to post-SOX. In addition, both my proxy for the risk or volatility of a director's wealth with respect to his or her respective share ownership of a firm (VAR) and my proxy for the growth opportunities of a firm (GROWTH) significantly decrease from pre- to post-SOX.

Table 5 presents descriptive statistics of director-level sample characteristics.

(Insert Table 5)

Panel A shows director characteristics for the full sample while Panel B shows comparisons between pre- and post-SOX. Consistent with MVE from Panel B of Table 4, the mean market value of a firm's common stock held by a director (DIRMV) is not significantly different from the pre- to post-SOX period. However, the mean percentage of a firm's common stock held by a director (DIR%) significantly decreases indicating that on average independent directors within my sample decreased their stock ownership of the firms they are charged with monitoring by 0.05% from pre- to post-SOX. Noteworthy to mention is that Panel B of Table 5 also shows that the mean tenure of a director of a firm increased from pre- to post-SOX indicating that on average my sample consists of directors from the pre-SOX period that still remained in my sample in the post-SOX period.

Table 6 presents descriptive statistics of director-level sample characteristics distinguishing between AC and NAC directors. Panel A shows that while the means

(Insert Table 6)

of DIR% and DIRMV for ACs are significantly different (lower) than that of NACs, the medians are significantly larger. Thus, the two director groups have differing underlying distributions in that the NAC sample has a greater variance relative to the AC sample.

The distributional differences do not pose any serious implications for my analyses due to the large sample size which relaxes homogeneity of variance assumptions and that the results are based on the Satterthwaite (1946) procedure for unequal variances.

Noteworthy to mention is that Panel A also shows that the mean tenure of ACs is

significantly different (larger) than that of NACs which should be consistent with potentially greater ownership for ACs relative to NACs.

Panel B also shows that the mean DIR% is significantly lower for ACs relative to NACs in both the pre- and post-SOX periods while the mean DIRMV is significantly lower for ACs relative to NACs only in the post-SOX period. Panel B also sheds more light on the significant mean difference of DIRTEN for ACs relative to NACs from Panel A in that the mean of DIRTEN is only significantly different in the pre-SOX period.

Table 7 presents director characteristics by comparing pre-SOX ACs to post-SOX ACs and pre-SOX NACs to post-SOX NACs. Interestingly, the mean of DIR% and

(Insert Table 7)

DIRMV for ACs appear to significantly decrease from pre- to post-SOX while remaining insignificantly different for NACs from pre- to post-SOX. Further, the mean of DIRTEN for both ACs and NACs alike appears to significantly increase in the post-SOX period relative to pre-SOX.

I refine my analyses by categorizing directors as ACONLYs, NACONLYs or ACNACs. Consistent with my focus on the audit committee monitoring role, I focus on directors that only participate on the audit committee (ACONLYs) within a firm as opposed to those directors that do not participate on the audit committee (NACONLYs) and those directors that participate in both types of monitoring roles (ACNACs). Table 8 presents comparisons of ACONLYs versus NACONLYs versus ACNACs for the full

(Insert Table 8)

sample in Panel A and then pre- and post-SOX comparisons for these three director monitoring groups in Panel B. Panel A of Table 8 shows that the means of DIR%,

DIRMV and DIRTEN for the director monitoring groups are all significantly different. Since this is a comparison of means between three groups, no conclusions can be made as to one particular group versus another, just that the means significantly differ between them. Panel B suggests that the significantly different means between the three director monitoring groups for DIR% and DIRMV exists in both the pre- and post-SOX periods. However, the mean of DIRMV is only significantly different between the three groups in the post-SOX period.

I further refine my analyses by creating a sub-sample consisting only of ACONLY and NACONLY directors to compare director characteristics between these two monitoring groups. Table 9 presents comparisons of ACONLYs versus NACONLYs

(Insert Table 9)

for the full sample in Panel A and then pre- and post-SOX comparisons for these two director monitoring groups in Panel B. Panel A of Table 9 shows that the means of DIR%, DIRMV and DIRTEN for ACONLYs are all significantly different (lower) than that of NACONLYs. Panel B suggests that the significantly lower mean of DIR% for ACONLYs relative to NACONLYs exists in both the pre- and post-SOX periods. However, the means of DIRMV and DIRTEN appear to only be significantly different (lower) for ACONLYs relative to NACONLYs in the post-SOX period.

In addition, I present director characteristics by comparing pre-SOX ACONLYs to post-SOX ACONLYs, pre-SOX NACONLYs to post-SOX NACONLYs and pre-SOX ACNACs to post-SOX ACNACs in Table 10. Table 10 suggests that only the mean of DIR% for ACONLYs and ACNACs appear to significantly decrease from pre- to post-

(Insert Table 10)

SOX while remaining insignificantly different for NACONLYs from pre- to post-SOX. However, the mean of DIRTEN for ACONLYs remains insignificantly different between the two periods while the means of DIRTEN for NACONLYs and ACNACs significantly increases in the post-SOX period relative to pre-SOX.

Table 11 presents Pearson (Spearman) correlation coefficients above (below) the diagonal. While many of the correlations are significant at the 0.05 level they are also

(Insert Table 11)

weak. AC and SEG are all significantly correlated with DIR% but in the opposite direction of my expectations. MVE, GROWTH, CEOTEN, %IND, and DIRTEN are all significantly correlated with DIR% and with the correct sign but only DIRTEN has a relatively strong association. Interestingly, while 301 and INST% do not exhibit a significant correlation with DIR%, VAR is fairly strongly and significantly negatively correlated with 301. Not surprisingly, GROWTH is strongly and significantly negatively correlated with MVE. None of the univariate correlations suggest any concerns with respect to my analyses. Despite the positive correlation between AC and DIR% in Table 11, I still expect a negative association when the necessary control variables are present in the estimation of my model.

2. Empirical Results

My primary analyses focus on the potential impact of AC on DIR%. Table 12 presents the estimation of my model without the interaction effects over various pooled sample combinations of pre- and post-SOX years. MVE behaves significantly and in the right direction for all of the analyses but two while VAR, CEOTEN, SEG and %IND are

insignificant or weakly significant at best. GROWTH and DIRTEN are both positive (as expected) with GROWTH significant at the 0.05 level in two out of six of the estimations

(Insert Table 12)

and DIRTEN significant at the 0.01 level across the board. Consistent with H1, AC is negative and significant at the 0.01 level in all estimations. Interestingly, 301 and BIGN fail to yield significant associations with DIR% while INST% is negative and significant at the 0.01 level in two estimations.

Table 13 repeats the same analyses that are in Table 12 using DIRMV as the dependent variable in lieu of DIR%. MVE is significant at the 0.01 level across the board

(Insert Table 13)

and while in the opposite direction as expected for its association with DIR% appears consistent with respect to DIRMV. Despite the insignificant association VAR has with DIR%, it is significant at the 0.01 level with DIRMV in two estimations. GROWTH, CEOTEN, SEG and %IND are all insignificant in all estimations except for SEG in the 2000:2007 estimation. Consistent with Table 12, DIRTEN is positive and significant at the 0.01 level in all estimations. Again, H1 is strongly supported in that AC is negative and significant at the 0.05 level or better in all estimations except one while INST% behaves comparably with its Table 12 results.

I then include my hypothesized AC interaction effects to examine their effect on DIR%. For brevity's sake, I only include analyses for the 2000 pre-SOX year pooled with the post-SOX years in Table 14. MVE, VAR, GROWTH, SEG, %IND, DIRTEN and INST% all perform similarly as before. While CEOTEN is significant at the 0.05 level

(Insert Table 14)

in the 2000:2005 estimation it is in the opposite direction as expected. The main effect of AC diminishes upon the inclusion of the interaction effects in the model. Table 14 provides some support for H2 in that AC*301 is negative and significant at the 0.05 (0.10) level in the 2000:2005 (2000:2007) estimations. There is also limited support for H4 in that the 2000:2005 estimation shows AC*INST% to be positive and significant at the 0.01 level.

Although the main (interaction) effect of BIGN is positive (negative) and significant at the 0.01 level in the 2000:2007 estimation, I hesitate to suggest support for H3 because upon analyzing my final sample I find that approximately 96% of my sample firms have a BigN auditor.

Table 15 repeats the interaction analyses found in Table 14 using DIRMV as the dependent variable in lieu of DIR%. MVE, VAR, GROWTH, CEOTEN, SEG, %IND,

(Insert Table 15)

DIRTEN and AC behave similarly as before. Interestingly, 301 is positive and significant at the 0.01 level while simultaneously and consistent with H2, AC*301 is negative and significant at the 0.01 level in the 2000:2005 estimation. 301 is also positive and significant at the 0.05 level in the 2000:2007 estimation. Table 15 reveals limited support for H4 again in that AC*INST% is positive and significant at the 0.01 level consistent with the previous analysis.

3. Sensitivity

ACONLY/NACONLY/ACNAC:

As noted earlier, I categorize an independent director that participates on the audit committee as an AC and those that do not participate on the audit committee as a NAC.

Thus, this categorization allows for the possibility of an AC to also participate on other board non-audit committees. Therefore, I also categorize directors with respect to those that only serve on the audit committee (ACONLYs), those that only serve on non-audit committees (NACONLY's) and those that participate in both monitoring roles (ACNACS). Using a sub-sample of firms in which ACONLYs, NACONLYs and ACNACS are represented on the firm's board, I re-examine my analyses.

Table 16 essentially replaces Table 12 and presents estimations of my main effects model with DIR% as the dependent variable and substituting the dichotomous AC variable with indicator variables that identify directors as ACONLYs and NACONLYs and indirectly identifies directors as ACNACS when both ACONLY and NACONLY equal 0. Virtually all of the control variables behave as before except that while

(Insert Table 16)

CEOTEN (%IND) was previously insignificant, it is now negative and significant at the 0.05 level in the 2001:2007 (2001:2006) estimation. Despite not having made formal hypotheses for ACONLY (NACONLY), a logical assumption is that if significant, there would be a negative (positive) association with DIR%. Interestingly, I find no significant association between ACONLY and DIR%. Table 16 does provide consistent evidence of a positive and significant association between NACONLY and DIR%.

The insignificance of ACONLY in Table 16 indicates that ACNACS are driving the AC results. This suggests that while ACONLYs do not significantly differ from other independent directors with respect to their ownership, directors that perform monitoring roles in both an AC and a NAC capacity for the same firm may be associated with relatively less ownership than those directors that perform one role exclusively.

Consistent with ownership serving as a means of aligning director and shareholder interests, the consistency of the monitoring role that independent directors play with respect to the audit committee may affect this alignment and serve as a potential proxy for audit committee objectivity.

Table 17 simply repeats the ACONLY/NACONLY analyses found in Table 16 using DIRMV as the dependent variable in lieu of DIR%. Thus, Table 17 is an extension of the analyses in Table 13 replacing AC with ACONLY and NACONLY. Again, all of the control variables behave in a similar manner as Table 13 when the analyses were conducted using AC. And again, ACONLY fails to have a significant association while

(Insert Table 17)

there is some evidence that NACONLY is significant and positively associated with DIRMV. INST% also behaves as before.

Table 18 extends the main effects analyses from Table 16 to examine the impact of the interactions of ACONLY/NACONLY on DIR%. MVE, VAR, GROWTH, CEOTEN, SEG, %IND and DIRTEN all behave consistently with Table 16 results. However, whereas INST% is negative and significant in Table 16, it fails to have a significant association in the interactions model in Table 18.

(Insert Table 18)

Further, ACONLY is insignificant in Table 16 but is positive and significant with the inclusion of the interactions in Table 18 while NACONLY is insignificant in Table 18 when the interactions are included. None of the ACONLY interactions are significant while NACONLY*INST% is negative and significant at the 0.01 level in the 2000:2005 estimation.

Lastly, Table 19 repeats the interaction analyses found in Table 18 using DIRMV as the dependent variable in lieu of DIR%.

(Insert Table 19)

Additionally, I estimate my models using ACONLY and excluding NACONLY effectively lumping all NACONLYs and ACNACs together. Results are unchanged in that ACONLY remains insignificant.

Other Sensitivity:

I also conduct the analyses found in Tables 14, 15, 18 and 19 using the 2001 pre-SOX year separately combined with the 2005, 2006 and 2007 post-SOX periods. Results obtained are similar to those reported.

In addition, I estimate my models using BIGNLAG and INST%LAG yielding similar results as presented except that BIGNLAG and INST%LAG are insignificant. The insignificance of BIGNLAG and INST%LAG indicates that the past monitoring environment of the firm is not as important with respect to serving as additional or alternative monitoring mechanisms as the current firm monitoring environment may provide.

Denis and Sarin (1999) include CEOTEN in their model consistent with their estimation of aggregate ownership of all officers and directors of a firm. I include CEOTEN in my reported estimations but I also conduct my analyses excluding CEOTEN because my estimation of ownership is at the director level and my sample only includes independent directors. Excluding CEOTEN from my model has little or no effect on reported results.

As noted earlier, approximately 96% of my sample firms have a BIGN auditor.

Thus, I rerun my analyses excluding BIGN in the main effects analyses and find my results unchanged. I also exclude BIGN and AC*BIGN from my interaction models and find my results unchanged as well except that AC becomes negative and significant at the 0.05 level or better in most of the estimations. The unchanged results upon excluding BIGN in my main effects analyses in conjunction with the significance of AC in the interaction model upon removing BIGN from the estimation is consistent with a collinear relationship between the lack of variability of BIGN throughout my sample and AC whereby the presence of BIGN masked the AC effect.

To ensure that my results are not driven by influential observations, I calculate leverage statistics and standardized residuals for all observations. I estimate my model excluding observations with leverage statistics greater than $2k/n$ (where k equals the number of explanatory variables and n equals the number of observations). I also estimate my model excluding observations with residuals greater (less) than or equal to -3 ($+3$). Results obtained excluding influential observations in either case mirror reported results except that several control variables (MVE, VAR and GROWTH) behave better in that they become more consistently significant at the 0.05 level or better.

Lastly, I calculate DIR% using the percentage of a firm's common stock held by a director with respect to common stock outstanding as of one, two and three weeks prior to the annual meeting date. I also calculate DIRMV using the market value of a firm's common stock held by a director with respect to the closing stock price as of one, two and three weeks prior to the annual meeting date. Results are unchanged using these alternative dependent variable measures.

CHAPTER 7: CONCLUSION

I examine the association that a director's monitoring role has with respect to their firm ownership. I distinguish directors by whether they reside on the audit committee (ACs) or not (NACs) and assess whether Section 301 or proxies for alternative independent monitoring (BigN auditor and the percentage of institutional ownership) affects this relation. I know of no other study that examines whether Section 301 is associated with AC's ownership. I provide evidence that ACs monitoring role is negatively associated with their ownership suggesting differences with respect to independence in appearance/alignment with shareholder interests not previously documented amongst independent directors. I also find some evidence that Section 301 may contribute to this differential ownership while the presence of institutional ownership moderates this relationship.

The differential association I find between independent directors' monitoring roles and their respective ownership and/or the potential impacts from other monitoring mechanisms may suggest *ex ante* components of financial reporting objectivity not previously considered. Thus, firms may find it necessary to revisit the "one-size fits all" approach that firms typically have regarding company stock ownership guidelines for non-officer directors. I know of no other study that examines the association between independent directors' monitoring roles and their respective ownership.

My results also suggest that Section 301 may contribute to the differential

association between directors' monitoring roles and their ownership indicating that regulatory scrutiny that distinguishes between ACs and NACs may contribute to the differential association I find. Regulators will inevitably revisit independence concerns in the future and may potentially benefit from my findings.

My findings also indicate that the presence of institutional ownership appears to moderate the differential association between ACs and NACs monitoring role and their ownership consistent with ACs viewing institutional investors as an alternative monitoring mechanism. My findings may be informative to both regulators and investors in providing a better understanding of the influence that a director's monitoring role has on their respective ownership as well as the effect that Section 301 and other monitoring mechanisms have on the important role that ACs play in the monitoring process.

The lack of results for ACONLY is informative as well. The insignificant association between ACONLY's monitoring role and their ownership is consistent with ACONLYs not considering ownership as a means of differentiating themselves from other independent directors. The lack of results for ACONLY also suggests that the results for AC are likely driven by the fact that the categorization of AC includes directors that participate on the audit committee but not exclusively. Thus, directors that perform monitoring roles in both an AC and a NAC capacity for the same firm may be associated with relatively less ownership than those directors that perform one role exclusively.

Overall, my results suggest that directors who only perform audit committee monitoring functions do not significantly differ from other independent directors with respect to their ownership. In addition, directors that perform audit committee monitoring

functions in conjunction with other non-audit committee monitoring functions do significantly differ from other independent directors with respect to their ownership. Thus, the consistency of the monitoring role that independent directors play with respect to the audit committee may serve as a potential proxy for audit committee objectivity and/or alignment with shareholder interests. In addition to current regulatory cautions to audit committee members regarding assessing the extent to which additional outside board commitments may interfere with their audit committee responsibilities, my findings may suggest a need to restrict audit committee members from serving on other incumbent board committees.

Further research is necessary to determine if there is a difference in financial reporting quality and/or perceptions of reporting quality between firms having audit committees wholly (or predominantly) comprised of ACONLY directors and/or ACNACs as opposed to those firms that do not.

As with any study my analyses are subject to limitations. My results are limited by the nature of the available data and the lack of personal wealth and/or risk preferences of directors that would likely contribute to much stronger analyses. Due to the large size of the firms in my sample, my results may not extend to smaller firm settings. Despite the strong evidence supporting my main hypothesis, the evidence supporting my remaining hypotheses is dependent upon the particular combinations of pre- and post-SOX years used in the analyses. Further, while I control for director tenure on a firm's board of directors, the tenure that a director has with respect to a particular committee is not considered and may potentially affect my results. My results also may vary if committee members are held constant over time.

APPENDIX A: TABLES

Table 1
NYSE/NASDAQ Distinctions Between ACs and NACs^a

<u>Requirement of BOD committees</u>	<u>NYSE</u>	<u>NASDAQ</u>
Requirement of audit committee	July 1, 1978	February 1, 1989
Requirement of other committees (i.e., nominating/ corporate governance and compensation)	November 4, 2003 ^b	n/a
<u>Delegation of Director duties</u>		
Ability to delegate AC's duties to other directors	Prohibited ^c	Prohibited ^d
Ability to delegate NAC's duties to other directors	Allowed ^b	Allowed ^d
<u>Additional AC considerations relative to NACs</u>		
Evaluate carefully existing demands on time	Yes ^e	n/a
Evaluate whether simultaneous service impairs performance	Yes ^e	n/a
<u>Fee payments</u>		
Payments to ACs other than capacity as BOD member	Prohibited ^f	Prohibited ^f
Payments to NACs other than capacity as BOD member	Allowed ^g	Allowed ^h

^aAC = audit committee member and NAC = non-audit committee member.

^bSee Sections 303A.04 Commentary and 303A.05 Commentary.

^cSee Section 303A.07 General Commentary.

^dSee 4350(c)(3)(A)(i); (ii) and 4350(c)(3)(B)(i); (ii) and 4350(c)(4)(A)(i) and (ii).

^eSee Section 303A.07(a) Commentary.

^fSee Section 10A(m)(3)(B)(i) of the Sec. Exch. Act of 1934 as amended by Section 301 of SOX which prohibits any payments to ACs other than those related to the ACs' capacity as a board/committee member.

^gPayments to directors other than that associated with their specific role as a director were always allowed as long as the board, using its "business judgment," decided it did not interfere with the director's independent judgment. See Section 303A.02(b) allowing \$100,000 as of 11/04/03 (\$120,000 as of 8/12/08) per year.

^hSee Rule 4200(a)(15) allowing \$60,000 as of December, 1999 (\$120,000 as of 8/01/06) per year. In addition, both the NYSE and the NASDAQ listing standards instruct firms to not only comply with the exchange provisions but also with the independence requirements established under Section 301. See Section 303A.06 in the NYSE Manual and Rule 4350(d)(2)(A) in the NASDAQ Manual.

Table 2
Sample Selection Summary

Panel A: Firm Observations	Sample Period	Pre-SOX				Post-SOX			Total
		1999	2000	2001	Total	2004	2005	2006	
Fiscal Year		12,773	12,376	11,902	37,051	11,125	10,919	10,684	32,728
Compustat Fundamentals Annual Universe		7,680	7,269	7,245	22,194	7,241	7,157	7,063	21,461
Less firm observations with missing: financial data		802	1,873	1,791	4,466	1,450	1,411	1,369	4,230
segments data		842	609	550	2,001	447	373	340	1,160
CRSP stock returns data		2,771	2,036	1,685	6,492	1,337	1,358	1,305	4,000
EXECUCOMP data		259	133	166	558	170	149	209	528
RiskMetrics Data		419	456	465	1,340	480	471	398	1,349
Annual meetings in calendar year 2000		417	38		455				
Annual meetings in calendar year 2001			417	35	452				
Total firm observations with annual meetings in the Pre-SOX period		907							
Annual meetings in calendar year 2005						439	40		479
Annual meetings in calendar year 2006							431	32	463
Annual meetings in calendar year 2007								366	366
Total firm observations with annual meetings in the Post-SOX period						1,308			

Total firm observations with annual meetings in both Pre- and Post-SOX periods 2,215
(continued on next page)

Table 2
Sample Selection Summary (continued)

Panel B: Director Observations Sample Period Meeting Year	Pre-SOX			Post-SOX			Sample Total
	2000	2001	Total	2005	2006	2007	
Risk Metrics Directors Universe	16,675	16,669	33,344	13,582	13,372	13,338	40,292
Less director observations due to:							73,636
missing firm and/or director data	12,890	12,957	25,847	9,537	9,393	10,273	29,203
non-independent directors	1,583	1,427	3,010	1,204	1,136	745	3,085
Total director observations	2,202	2,285	4,487	2,841	2,843	2,320	8,004
Total firm-year observations	455	452	907	479	463	366	1,308
Frequency of NAC ^a	964	970	1,934	1,232	1,262	1,055	3,549
Frequency of AC ^a	1,238	1,315	2,553	1,609	1,581	1,265	4,455
Total director observations	2,202	2,285	4,487	2,841	2,843	2,320	8,004
							12,491

The full sample consists of firms having annual meetings that occurred in the years 2000 through 2007 excluding the years 2002 through 2004 (the enactment of the Sarbanes-Oxley Act in 2002 and the statutory effective compliance dates for Section 301 of SOX. The years 2000 and 2001 comprise the Pre-SOX period and the years 2005 through 2007 comprise the Post-SOX period.^a See Table 3 for variable definitions.

Table 3
Variable Definitions

Variable	Definition
<u>Dependent Variable^a</u>	
DIR%	The percentage of a firm's common stock held by a director with respect to common stock outstanding as of the annual meeting date.
DIRMV	The market value of a firm's common stock held by a director with respect to closing stock price as of the annual meeting date.
<u>Treatment Variables</u>	
AC	A dichotomous variable equal to 1 if a director serves on the audit committee of his or her firm, 0 otherwise (i.e., NAC).
301	A dichotomous variable equal to 1 for the post-SOX sample period, 0 otherwise.
BIGN	A dichotomous variable equal to 1 if a firm has a BigN auditor for the fiscal year immediately prior to the annual meeting date, 0 otherwise.
INST%	The percentage of a firm's common stock held by institutions as of the calendar quarter end consistent with or immediately prior to a firm's fiscal year end.
ACONLY	An indicator variable equal to 1 if a director serves only on the audit committee of his or her firm, 0 otherwise.
NACONLY	An indicator variable equal to 1 if a director serves only on non-audit committees of his or her firm, 0 otherwise.
ACNAC	A director that serves in both an audit committee and a non-audit committee capacity for his or her firm (the result when both ACONLY and NACONLY = 0).
BIGNLAG	A dichotomous variable equal to 1 if a firm has a BigN auditor for the second fiscal year prior to the annual meeting date, 0 otherwise.
INST%LAG	The percentage of a firm's common stock held by institutions one year prior to the calendar quarter end consistent with or immediately prior to a firm's fiscal year end.
<u>Control Variables^b</u>	
MVE	The natural log of the market value of a firm's common stock.
VAR	The variance of a firm's daily stock returns over the firm's fiscal year immediately prior to the firm's annual meeting date.

GROWTH	The industry median (by 2-digit SIC) market value of a firm divided by the book value of total assets.
CEOTEN	The tenure of the CEO of a firm in years.
SEG	The number of reported segments of a firm.
%IND	The number of independent directors divided by the number of directors on a firm's board per the proxy statement.
	(continued on next page)
DIRTEN	The tenure of a director of a firm in years per the proxy statement.

^aRisk Metrics reports shares held by directors via firm's proxy statements. Risk Metrics does not report the proxy statement filing date but does provide the annual meeting date. Thus, the percentage (market value) of a firm's common stock held by a director is based on a firm's common shares outstanding (closing stock price) as of the annual meeting date as well as one, two and three weeks prior. All directors within the sample are independent directors.

^bAll control variables are measured as of the end of a firm's fiscal year immediately prior to the firm's annual meeting date unless otherwise noted.

Table 4
Firm Characteristics

Panel A: Full Sample (N = 2,215)						
Variables		Mean		Median		Standard Deviation
INST%		70.75%		77.46%		27.78%
MVE		4,922		1,436		15,371
VAR		0.1195%		0.0676%		0.14%
GROWTH		31.92%		15.46%		52.04%
CEOTEN		7.10		5.00		7.02
SEG		5.88		5.00		3.62
%IND		67.57%		70.00%		16.66%

Panel B: Pre-SOX (N = 907), Post-SOX (N = 1,308)						
Variables	Period	Mean		Median		Standard Deviation
INST%	Pre	55.73%		62.49%		29.57%
	Post	81.17%	***	84.35%	***	20.89%
MVE	Pre	5,181		1,210		19,898
	Post	4,743		1,618	***	11,212
VAR	Pre	0.2150%		0.1618%		0.1801%
	Post	0.0533%	***	0.0454%	***	0.0379%
GROWTH	Pre	24.37%		11.82%		39.06%
	Post	37.16%	***	17.78%	***	58.85%
CEOTEN	Pre	6.75		5.00		6.89
	Post	7.34		5.00		7.09
SEG	Pre	5.50		5.00		3.59
	Post	6.14	***	5.00		3.62
%IND	Pre	60.57%		62.50%		18.78%
	Post	72.42%	***	72.73%	***	12.98%

MVE is reported in 000,000's. * / ** / *** The mean (median) is significantly different (Pre-SOX versus Post-SOX) at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels improve in that the mean for CEOTEN is significant at the 0.05 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 5
Director Characteristics

Panel A: Full Sample (N = 12,491)				
Variables		Mean	Median	Standard Deviation
DIR%		0.23%	0.04%	1.36%
DIRMV		6,841,947	771,621	73,553,197
DIRTEN		6.20	5.00	5.15

Panel B: Pre-SOX (N = 4,487), Post-SOX (N = 8,004)				
Variables	Period	Mean	Median	Standard Deviation
DIR%	Pre	0.26%	0.05%	1.32%
	Post	0.21% **	0.04%	1.38%
DIRMV	Pre	7,413,740	578,803	67,954,476
	Post	6,521,403	886,238 ***	76,515,077
DIRTEN	Pre	5.70	5.00	4.86
	Post	6.49 ***	5.00	5.28

* / ** / *** The mean (median) is significantly different (Pre-SOX versus Post-SOX) at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels improve in that the mean for DIR% is significant at the 0.01 level and the mean for DIRMV is significant at the 0.05 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 6
Director Characteristics – AC Versus NAC

Panel A – Full Sample: AC (N = 7,008), NAC (N = 5,483)					
Variables		Mean	Median	Standard Deviation	
DIR%	AC	0.17%***	0.05%***	0.67%	
	NAC	0.31%	0.04%	1.90%	
DIRMV	AC	4,312,694***	784,183**	39,601,536	
	NAC	10,074,669	759,184	101,503,409	
DIRTEN	AC	6.36***	5.00	5.01	
	NAC	6.00	5.00	5.31	

Panel B					
Pre-SOX: AC (N = 2,553), NAC (N = 1,934)					
Post-SOX: AC (N = 4,455), NAC (N = 3,549)					
Variables	Period		Mean	Median	Standard Deviation
DIR%	Pre-	AC	0.21%***	0.05%***	0.94%
		NAC	0.33%	0.04%	1.68%
	Post-	AC	0.14%***	0.05%***	0.44%
		NAC	0.30%	0.04%	2.01%
DIRMV	Pre-	AC	5,946,221	610,871***	55,492,385
		NAC	9,350,956	511,815	81,514,703
	Post-	AC	3,376,578***	875,229	26,465,116
		NAC	10,469,050	899,437	110,898,580
DIRTEN	Pre-	AC	6.06***	5.00***	4.78
		NAC	5.23	4.00	4.92
	Post-	AC	6.54	5.00	5.13
		NAC	6.42	5.00	5.47

* / ** / *** The mean (median) is significantly different at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Panel A: Significance levels of means and medians are unchanged upon winsorizing at the 1 and 99th percentiles by year and industry. Panel B: Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels in the Pre-SOX period improve in that the mean for DIRMV is significant at the 0.01 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 7
 Director Characteristics
 Pre-SOX AC Versus Post-SOX AC
 Pre-SOX NAC Versus Post-SOX NAC

Pre-SOX: AC (N = 2,553), NAC (N = 1,934)

Post-SOX: AC (N = 4,455), NAC (N = 3,549)

Variables	Period		Mean	Median	Standard Deviation
DIR%	Pre-	AC	0.21%***	0.05%	0.94%
	Post-	AC	0.14%	0.05%	0.44%
	Pre-	NAC	0.33%	0.04%	1.68%
	Post-	NAC	0.30%	0.04%	2.01%
DIRMV	Pre-	AC	5,946,221**	610,871***	55,492,385
	Post-	AC	3,376,578	875,229	26,465,116
	Pre-	NAC	9,350,956	511,815***	81,514,703
	Post-	NAC	10,469,050	899,437	110,898,580
DIRTEN	Pre-	AC	6.06***	5.00	4.78
	Post-	AC	6.54	5.00	5.13
	Pre-	NAC	5.23***	4.00***	4.92
	Post-	NAC	6.42	5.00	5.47

* / ** / *** The mean (median) is significantly different at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Upon winsorizing at the 1 and 99th percentiles by year and industry the mean of DIR% for NAC becomes significantly different from Pre- to Post-SOX at the 0.10 level and the significant difference between Pre- and Post-SOX of the mean of DIRMV for AC improves at the 0.01 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 8
Director Characteristics – ACONLY Versus NACONLY Versus ACNAC

Panel A – Full Sample: ACONLY (N = 2,468), NACONLY (N = 5,483), ACNAC (N = 4,540)

Variables		Mean		Median	Standard Deviation
DIR%	ACONLY	0.14%	***	0.03%	0.74%
	NACONLY	0.31%		0.04%	1.90%
	ACNAC	0.18%		0.06%	0.63%
DIRMV	ACONLY	5,498,066	***	570,682	58,073,527
	NACONLY	10,074,669		759,184	101,503,409
	ACNAC	3,668,310		902,366	24,224,267
DIRTEN	ACONLY	5.27	***	4.00	4.63
	NACONLY	6.00		5.00	5.31
	ACNAC	6.96		6.00	5.10

(continued on next page)

Table 8
Director Characteristics – ACONLY Versus NACONLY Versus ACNAC (continued)

Panel B:

Pre-SOX: ACONLY (N = 1,000), NACONLY (N = 1,934), ACNAC (N = 1,553)

Post-SOX: ACONLY (N = 1,468), NACONLY (N = 3,549), ACNAC (N = 2,987)

Variables	Period		Mean	Median	Standard Deviation
DIR%	Pre-	ACONLY	0.21% **	0.04%	1.10%
		NACONLY	0.33%	0.04%	1.68%
		ACNAC	0.21%	0.07%	0.83%
	Post-	ACONLY	0.10% ***	0.03%	0.30%
		NACONLY	0.30%	0.04%	2.01%
		ACNAC	0.16%	0.06%	0.49%
DIRMV	Pre-	ACONLY	8,130,647	502,873	77,226,762
		NACONLY	9,350,956	511,815	81,514,703
		ACNAC	4,539,637	674,940	34,922,483
	Post-	ACONLY	3,704,755 ***	609,143	40,027,106
		NACONLY	10,469,050	899,437	110,898,580
		ACNAC	3,215,290	1,009,350	16,047,632
DIRTEN	Pre-	ACONLY	5.26 ***	4.00	4.55
		NACONLY	5.23	4.00	4.92
		ACNAC	6.58	5.00	4.85
	Post-	ACONLY	5.27 ***	4.00	4.68
		NACONLY	6.42	5.00	5.47
		ACNAC	7.16	6.00	5.23

* / ** / *** The mean is significantly different at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means. Panel A: Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels improve in that the mean for DIRMV is significant at the 0.01 level. Panel B: Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels in the Pre-SOX period improve in that the mean for DIRMV is significant at the 0.05 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 9
Director Characteristics – ACONLY Versus NACONLY

Panel A – Full Sample: ACONLY (N = 2,468), NACONLY (N = 5,483)

Variables		Mean		Median		Standard Deviation
DIR%	ACONLY	0.14%	***	0.03%	***	0.74%
	NACONLY	0.31%		0.04%		1.90%
DIRMV	ACONLY	5,498,066	**	570,682	***	58,073,527
	NACONLY	10,074,669		759,184		101,503,409
DIRTEN	ACONLY	5.27	***	4.00	***	4.63
	NACONLY	6.00		5.00		5.31

Panel B:
Pre-SOX: ACONLY (N = 1,000), NACONLY (N = 1,934)
Post-SOX: ACONLY (N = 1,468), NACONLY (N = 3,549)

Variables	Period		Mean		Median		Standard Deviation
DIR%	Pre-	ACONLY	0.21%	**	0.04%		1.10%
		NACONLY	0.33%		0.04%		1.68%
	Post-	ACONLY	0.10%	***	0.03%	***	0.30%
		NACONLY	0.30%		0.04%		2.01%
DIRMV	Pre-	ACONLY	8,130,647		502,873		77,226,762
		NACONLY	9,350,956		511,815		81,514,703
	Post-	ACONLY	3,704,755	***	609,143	***	40,027,106
		NACONLY	10,469,050		899,437		110,898,580
DIRTEN	Pre-	ACONLY	5.26		4.00		4.55
		NACONLY	5.23		4.00		4.92
	Post-	ACONLY	5.27	***	4.00	***	4.68
		NACONLY	6.42		5.00		5.47

* / ** / *** The mean (median) is significantly different at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Panel A: Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels improve in that the mean for DIRMV is significant at the 0.01 level. Panel B: Upon winsorizing at the 1 and 99th percentiles by year and industry significance levels in the Pre-SOX period improve in that the mean for DIRMV is significant at the 0.05 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 10
 Director Characteristics
 Pre-SOX ACONLY Versus Post-SOX ACONLY
 Pre-SOX NACONLY Versus Post-SOX NACONLY
 Pre-SOX ACNAC Versus Post-SOX ACNAC

Pre-SOX: ACONLY (N = 1,000), NACONLY (N = 1,934), ACNAC (N = 1,553)
 Post-SOX: ACONLY (N = 1,468), NACONLY (N = 3,549), ACNAC (N = 2,987)

Variables	Period		Mean	Median	Standard Deviation
DIR%	Pre-	ACONLY	0.21%***	0.04%***	1.10%
	Post-	ACONLY	0.10%	0.03%	0.30%
	Pre-	NACONLY	0.33%	0.04%	1.68%
	Post-	NACONLY	0.30%	0.04%	2.01%
	Pre-	ACNAC	0.21%**	0.07%*	0.83%
	Post-	ACNAC	0.16%	0.06%	0.50%
DIRMV	Pre-	ACONLY	8,130,647*	502,873*	77,226,762
	Post-	ACONLY	3,704,755	609,143	40,027,106
	Pre-	NACONLY	9,350,956	511,815***	81,514,703
	Post-	NACONLY	10,469,050	899,437	110,898,580
	Pre-	ACNAC	4,539,637	674,940***	34,922,483
	Post-	ACNAC	3,215,290	1,009,350	16,047,632
DIRTEN	Pre-	ACONLY	5.26	4.00	4.55
	Post-	ACONLY	5.27	4.00	4.68
	Pre-	NACONLY	5.23***	4.00***	4.92
	Post-	NACONLY	6.42	5.00	5.47
	Pre-	ACNAC	6.58***	5.00***	4.85
	Post-	ACNAC	7.16	6.00	5.23

* / ** / *** The mean (median) is significantly different at the 0.10 / 0.05 / 0.01 level using a two-tailed t test of means (Wilcoxon rank sums test). Upon winsorizing at the 1 and 99th percentiles by year and industry the mean of DIR% for NACONLY becomes significantly different from Pre- to Post-SOX at the 0.10 level and the significant difference between Pre- and Post-SOX of the mean of DIRMV for ACONLY improves at the 0.01 level. See Table 2 for sample selection summary. Variables are defined in Table 3.

Table 11
Pearson and Spearman Correlation Coefficients for Equation 1

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)DIR%	1	-0.0532	-0.0179	-0.0090	-0.0454	-0.0211	0.0302	0.0524	-0.0131	-0.0258	-0.0202	0.0726
(2)AC	0.0580	1	-0.0120	-0.0332	-0.0048	-0.0329	0.0325	0.0490	0.0364	-0.0237	-0.1289	0.0353
(3)301	-0.0024	-0.0120	1	-0.0591	0.4274	-0.0127	-0.5531	0.1075	0.0502	0.0818	0.2755	0.0729
(4)BIGN	-0.0564	-0.0332	-0.0591	1	0.0138	0.0472	0.0344	-0.1405	-0.0725	0.0187	0.0759	0.0070
(5)INST%	0.0153	-0.0019	0.4632	0.0293	1	-0.0723	-0.3570	-0.0011	0.0427	0.0052	0.2304	0.0584
(6)MVE	-0.3972	-0.0492	0.1053	0.1241	0.0719	1	-0.0282	-0.1459	-0.0449	0.0596	0.0098	-0.0208
(7)VAR	0.1710	0.0362	-0.6486	-0.0068	-0.3562	-0.3096	1	0.0926	-0.0173	-0.0728	-0.1709	-0.0656
(8)GROWTH	0.3892	0.0554	0.1573	-0.0954	0.1266	-0.6373	0.1889	1	0.0697	-0.1370	-0.0065	0.0192
(9)CEOTEN	0.1163	0.0186	0.0571	-0.0423	0.0355	-0.0605	0.0023	0.1121	1	-0.0096	-0.1091	0.1220
(10)SEG	-0.0914	-0.0227	0.0860	0.0066	0.0047	0.1152	-0.0712	-0.1811	-0.0483	1	0.1197	-0.0163
(11)%IND	-0.0531	-0.1212	0.2377	0.0878	0.2294	0.0998	-0.1995	-0.0421	-0.0859	0.1261	1	-0.0092
(12)DIRTEN	0.5528	0.0589	0.0658	0.0107	0.0542	-0.0188	-0.0751	0.0364	0.1221	-0.0172	-0.0181	1

Pearson (Spearman) correlation coefficients are above (below) the diagonal. Coefficients in **bold** are significant at ≤ 0.05 level. Variables are defined in Table 3.

Table 12 - Main Effects
The Impact of Director Monitoring Role (AC) and Firm Monitoring on DIR%

Sample Variable	2000:2005 Predicted Sign	2000:2005 Param t-stat	2000:2006 Param t-stat	2000:2007 Param t-stat	2001:2005 Param t-stat	2001:2006 Param t-stat	2001:2007 Param t-stat
Intercept	?	0.0078 2.94***	0.0077 4.66***	0.0074 3.37***	0.0067 2.44**	0.0065 3.83***	0.0071 3.16***
MVE	-	-0.0003-1.30	-0.0005-3.65***	-0.0006-2.91***	-0.0002-0.85	-0.0004-2.75***	-0.0004-2.17**
VAR	?	0.2673 0.79	0.4042 1.71*	0.3301 1.12	0.0558 0.27	0.1183 0.84	0.0732 0.42
GROWTH	+	0.0007 0.96	0.0010 2.05**	0.0006 1.09	0.0014 1.66*	0.0017 3.33***	0.0012 1.81*
CEOTEN	+	-0.0001-1.90*	-0.0001-1.87*	-0.0001-1.72*	-0.0001-1.36	0.0000-1.19	-0.0001-1.47
SEG	+	-0.0001-1.48	0.0000-0.50	-0.0001-1.78*	-0.0001-1.41	0.0000-0.21	-0.0001-1.72*
%IND	-	-0.0008-0.44	-0.0009-0.70	-0.0002-0.12	-0.0014-0.76	-0.0012-1.02	-0.0001-0.05
DIRTEN	+	0.0003 5.99***	0.0002 6.18***	0.0002 4.46***	0.0003 6.03***	0.0002 6.42***	0.0002 4.65***
AC (H1)	-	-0.0018-3.98***	-0.0014-4.24***	-0.0018-4.64***	-0.0018-4.18***	-0.0014-4.51***	-0.0019-4.86***
301	?	0.0007 1.11	-0.0002-0.40	0.0008 1.36	0.0002 0.34	-0.0007-1.50	0.0002 0.34
BIGN	?	-0.0003-0.17	-0.0009-0.97	0.0008 0.71	0.0005 0.30	-0.0003-0.31	0.0003 0.22
INST%	?	-0.0040-3.68***	-0.0011-1.52	-0.0017-1.72*	-0.0038-3.54***	-0.0011-1.47	-0.0018-1.85*
		N = 5043	N = 5045	N = 4522	N = 5126	N = 5128	N = 4605
		668 Levels	669 Levels	645 Levels	628 Levels	632 Levels	619 Levels
		QIC 5074	QIC 5065	QIC 4543	QIC 5159	QIC 5154	QIC 4629
		QICu 5055	QICu 5057	QICu 4534	QICu 5138	QICu 5140	QICu 4617

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 13 - Main Effects
The Impact of Director Monitoring Role (AC) and Firm Monitoring on DIRMV

Sample Variable	2000:2005	2000:2006	2000:2007	2001:2005	2001:2006	2001:2007
	Param t-stat	Param t-stat	Param t-stat	Param t-stat	Param t-stat	Param t-stat
Intercept	? -22.6938-1.52	-31.3184-3.74***	-32.1494-3.32***	-22.3579-1.32	-32.7285-3.20***	-31.3954-2.68***
MVE	+ 5.8506 4.78***	5.4110 7.52***	5.4773 6.53***	6.3412 4.90***	6.1348 7.35***	6.4811 6.83***
VAR (x100)	? 29.0973 1.51	40.4745 3.44***	39.8932 3.06***	11.8807 0.94	16.2234 1.95*	15.2885 1.68*
GROWTH	+ 0.3267 0.08	1.0924 0.46	-0.1778-0.07	2.0895 0.41	4.5275 1.44	2.0821 0.60
CEOTEN	+ -0.3516-1.49	-0.1405-0.99	-0.1931-1.16	-0.2764-1.10	-0.1588-0.97	-0.2590-1.37
SEG	+ -0.5762-1.30	-0.3680-1.37	-0.6785-2.21**	-0.5372-1.14	-0.2503-0.80	-0.6417-1.82*
%IND	- -8.6971-0.85	-5.4288-0.88	-8.5381-1.18	-8.0450-0.72	-3.5846-0.49	-5.9430-0.69
DIRTEN	+ 1.1567 4.41***	0.8241 5.29***	0.6549 3.59***	1.2916 4.70***	0.9945 5.53***	0.8356 4.04***
AC (HI)	- -6.3459-2.55**	-2.4905-1.70*	-5.0204-2.91***	-7.7195-2.95***	-3.8626-2.28**	-6.3727-3.24***
301	? 5.3361 1.54	0.1149 0.05	4.2962 1.57	3.9802 1.05	-2.5829-1.01	1.4460 0.46
BIGN	? 1.0573 0.11	-2.4713-0.53	4.3979 0.84	-0.1696-0.02	-4.0786-0.70	-0.1870-0.03
INST%	? -17.7096-2.88***	-2.1797-0.58	-2.1016-0.48	-20.6416-3.13***	-5.4193-1.21	-6.0765-1.19
	N = 5043	N = 5045	N = 4522	N = 5126	N = 5128	N = 4605
	668 Levels	669 Levels	645 Levels	628 Levels	632 Levels	619 Levels
	QIC 5081	QIC 5086	QIC 4554	QIC 5167	QIC 5177	QIC 4644
	QICu 5055	QICu 5057	QICu 4534	QICu 5138	QICu 5140	QICu 4617

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 14 - Interaction Effects
The Impact of Director Monitoring Role (AC) and Firm Monitoring on DIR%

Sample Variable	Predicted Sign	2000:2005		2000:2006		2000:2007	
		Param	t-stat	Param	t-stat	Param	t-stat
Intercept	?	0.0075	2.31**	0.0073	3.64***	0.0040	1.56
MVE	-	-0.0003	-1.38	-0.0005	-3.68***	-0.0006	-2.95***
VAR	?	0.2680	0.79	0.4074	1.72*	0.3283	1.11
GROWTH	+	0.0007	0.90	0.0009	2.00**	0.0006	1.02
CEOTEN	+	-0.0001	-1.98**	-0.0001	-1.88*	-0.0001	-1.79*
SEG	+	-0.0001	-1.46	0.0000	-0.50	-0.0001	-1.79*
%IND	-	-0.0010	-0.53	-0.0009	-0.73	-0.0001	-0.08
DIRTEN	+	0.0003	5.97***	0.0002	6.18***	0.0002	4.38***
AC (H1)	-	-0.0014	-0.48	-0.0007	-0.37	0.0035	1.56
301	?	0.0018	2.25**	-0.0001	-0.15	0.0017	2.11**
BIGN	?	0.0027	1.09	0.0001	0.05	0.0046	2.64***
INST%	?	-0.0084	-5.73***	-0.0018	-1.73*	-0.0027	-1.99**
AC*301 (H2)	-	-0.0020	-2.13**	-0.0001	-0.20	-0.0015	-1.68*
AC*BIGN (H3)	+	-0.0046	-1.63	-0.0015	-0.89	-0.0060	-2.93***
AC*INST% (H4)	+	0.0077	4.48***	0.0012	0.93	0.0018	1.10
		N = 5043, 668 Levels		N = 5045, 669 Levels		N = 4522, 645 Levels	
		QIC 5101		QIC 5070		QIC 4547	
		QICu 5058		QICu 5060		QICu 4537	

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 15 - Interaction Effects
The Impact of Director Monitoring Role (AC) and Firm Monitoring on DIRMV

Sample Variable	2000:2005		2000:2006		2000:2007		
	Predicted Sign	Param	t-stat	Param	t-stat	Param	t-stat
Intercept	?	-15.3092	-0.83	-30.6842	-3.12***	-40.8508	-3.57***
MVE	+	5.7616	4.70***	5.4075	7.51***	5.4771	6.53***
VAR (x 100)	?	29.0590	1.51	40.4822	3.44***	39.6882	3.05***
GROWTH	+	0.2106	0.05	1.0910	0.46	-0.1465	-0.06
CEOTEN	+	-0.3656	-1.55	-0.1405	-0.99	-0.2000	-1.20
SEG	+	-0.5651	-1.28	-0.3675	-1.37	-0.6798	-2.21**
%IND	-	-9.4960	-0.93	-5.4574	-0.89	-7.9895	-1.10
DIRTEN	+	1.1487	4.38***	0.8249	5.28***	0.6376	3.49***
AC (H1)	-	-17.7198	-1.07	-3.5056	-0.42	8.8581	0.92
301	?	13.3288	2.90***	0.3162	0.11	7.1212	2.02**
BIGN	?	6.0173	0.43	-2.6879	-0.40	11.0129	1.42
INST%	?	-40.2975	-4.88***	-2.8951	-0.57	-1.2786	-0.22
AC*301 (H2)	-	-14.1269	-2.63***	-0.3557	-0.11	-5.2775	-1.32
AC*BIGN (H3)	+	-8.0214	-0.51	0.3426	0.04	-10.6022	-1.19
AC*INST% (H4)	+	39.8055	4.11***	1.2657	0.21	-1.3098	-0.18
				N = 5043, 668 Levels	N = 5045, 669 Levels	N = 4522, 645 Levels	
				QIC 5116	QIC 5088	QIC 4557	
				QICu 5058	QICu 5060	QICu 4537	

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. * ** *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 16 - Main Effects – Additional Analyses
The Impact of Director Monitoring Role (ACONLY/NACONLY) and Firm Monitoring on DIR%

Sample Variable	2000:2005 Predicted Sign	2000:2005 Param t-stat	2000:2006 Param t-stat	2000:2007 Param t-stat	2001:2005 Param t-stat	2001:2006 Param t-stat	2001:2007 Param t-stat
Intercept	?	0.0076 1.48	0.0075 2.80***	0.0078 2.36**	0.0033 0.65	0.0060 2.51**	0.0054 1.86*
MVE	-	0.0001 0.22	-0.0004-2.05**	-0.0005-1.63	0.0002 0.44	-0.0002-1.36	-0.0002-0.91
VAR	?	0.5870 0.88	1.1825 3.05***	1.2074 2.79***	0.3248 0.92	0.3844 2.00**	0.3750 1.78*
GROWTH	+	0.0002 0.16	0.0005 0.66	-0.0002-0.26	0.0006 0.43	0.0012 1.76*	0.0005 0.61
CEOTEN	+	-0.0001-1.41	-0.0001-2.06**	-0.0001-2.38**	-0.0001-1.01	-0.0001-2.23**	-0.0001-2.71***
SEG	+	-0.0002-1.29	0.0000-0.54	-0.0001-1.25	-0.0001-0.49	0.0001 0.91	0.0000 0.13
%IND	-	-0.0045-1.15	-0.0030-1.40	-0.0025-0.91	-0.0047-1.33	-0.0051-2.82***	-0.0054-2.44**
DIRTEN	+	0.0003 4.29***	0.0002 4.22***	0.0002 3.88***	0.0003 4.65***	0.0002 4.91***	0.0002 4.68***
ACONLY	-	0.0007 0.67	0.0003 0.42	0.0000-0.03	0.0009 0.94	0.0004 0.63	0.0002 0.25
NACONLY	+	0.0019 2.13**	0.0012 2.14**	0.0010 1.60	0.0021 2.53**	0.0012 2.48**	0.0011 2.00**
301	?	0.0011 0.91	0.0004 0.53	0.0010 1.11	0.0013 1.21	0.0000 0.05	0.0007 0.91
BIGN	?	-0.0010-0.34	-0.0019-1.27	-0.0011-0.65	0.0008 0.23	-0.0007-0.51	0.0008 0.45
INST%	?	-0.0058-3.06***	-0.0005-0.47	-0.0012-0.86	-0.0047-2.72***	-0.0002-0.26	-0.0006-0.52
		N = 2541 348 Levels	N = 2690 371 Levels	N = 2209 309 Levels	N = 2672 345 Levels	N = 2821 378 Levels	N = 2340 319 Levels
		QIC 2580	QIC 2712	QIC 2230	QIC 2705	QIC 2844	QIC 2361
		QICu 2554	QICu 2703	QICu 2222	QICu 2685	QICu 2834	QICu 2353

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 17 - Main Effects – Additional Analyses
 The Impact of Director Monitoring Role (ACONLY / NACONLY) and Firm Monitoring on DIRMV

Sample Variable	2000:2005 Predicted Sign	2000:2006 Param t-stat	2000:2007 Param t-stat	2001:2005 Param t-stat	2001:2006 Param t-stat	2001:2007 Param t-stat	
Intercept	?	-22.0238-0.68	-24.3238-2.12**	-23.2833-1.42	-31.3907-0.94	-18.2921-1.55	-23.5266-1.45
MVE	+	8.2861 3.29***	4.8254 5.16***	6.0396 4.35***	7.6102 3.26***	4.9380 5.53***	6.2740 5.12***
VAR(x100)	?	34.8040 0.83	75.1102 4.52***	71.8357 3.30***	1.1962 0.05	5.9268 0.62	7.4062 0.63
GROWTH	+	0.8680 0.10	-0.3364-0.11	-0.8993-0.21	3.9431 0.42	4.5113 1.31	3.7463 0.81
CEOTEN	+	-0.6050-1.18	-0.2530-1.39	-0.5623-2.03**	-0.3290-0.68	-0.2355-1.33	-0.5099-1.99**
SEG	+	-1.0201-1.16	-0.4021-1.21	-0.3997-0.81	-0.2471-0.30	0.2555 0.78	0.3924 0.86
%IND	-	-44.2697-1.79*	-25.0326-2.72***	-38.3337-2.84***	-28.4334-1.22	-20.9485-2.34**	-36.8974-2.97***
DIRTEN	+	1.8828 3.65***	1.0035 4.60***	1.0687 3.57***	2.1514 4.37***	1.2896 5.99***	1.4221 4.92***
ACONLY	-	7.4496 1.12	4.3816 1.54	4.1074 1.06	4.2275 0.67	0.8339 0.30	0.0837 0.02
NACONLY	+	13.0696 2.29**	5.1814 2.09**	5.8511 1.78*	13.8581 2.51**	5.0916 2.06**	6.1642 1.90*
301	?	8.5116 1.16	0.1089 0.04	4.3082 0.99	5.6972 0.81	-5.2957-1.76*	-0.9557-0.23
BIGN	?	6.3457 0.33	-1.9193-0.31	0.8125 0.10	4.8804 0.22	-4.8530-0.67	2.0549 0.22
INST%	?	-31.4827-2.64***	2.8444 0.61	0.2817 0.04	-31.9600-2.82***	-3.6497-0.78	-4.3770-0.67
		N = 2541	N = 2690	N = 2209	N = 2672	N = 2821	N = 2340
		348 Levels	371 Levels	309 Levels	345 Levels	378 Levels	319 Levels
		QIC 2582	QIC 2734	QIC 2244	QIC 2707	QIC 2865	QIC 2373
		QICu 2554	QICu 2703	QICu 2222	QICu 2685	QICu 2834	QICu 2353

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 18 - Interaction Effects – Additional Analyses
The Impact of Director Monitoring Role (ACONLY / NACONLY) and Firm Monitoring
on DIR%

Sample Variable	Predicted Sign	2000:2005		2000:2006		2000:2007	
		Param	t-stat	Param	t-stat	Param	t-stat
Intercept	?	0.0046	0.75	0.0059	1.71 *	0.0063	1.58
MVE	–	0.0001	0.15	-0.0005	-2.07 **	-0.0005	-1.63
VAR	?	0.5641	0.84	1.1813	3.04 ***	1.1997	2.77 ***
GROWTH	+	0.0001	0.11	0.0005	0.64	-0.0003	-0.33
CEOTEN	+	-0.0001	-1.45	-0.0001	-2.09 **	-0.0001	-2.42 **
SEG	+	-0.0002	-1.26	0.0000	-0.54	-0.0001	-1.31
%IND	–	-0.0048	-1.23	-0.0030	-1.38	-0.0025	-0.92
DIRTEN	+	0.0003	4.19 ***	0.0002	4.20 ***	0.0002	3.81 ***
ACONLY	–	0.0133	1.95 *	0.0079	2.03 **	0.0097	2.32 **
NACONLY	+	0.0032	0.56	0.0008	0.22	-0.0007	-0.20
301	?	-0.0006	-0.32	0.0002	0.22	0.0010	0.75
BIGN	?	-0.0013	-0.30	-0.0010	-0.42	-0.0008	-0.29
INST%	?	0.0012	0.38	0.0008	0.41	0.0005	0.22
ACONLY*301	–	0.0002	0.08	-0.0002	-0.14	-0.0009	-0.51
ACONLY*BIGN	+	-0.0104	-1.61	-0.0060	-1.71 *	-0.0076	-2.01 **
ACONLY*INST%	+	-0.0036	-0.90	-0.0023	-0.87	-0.0028	-0.88
NACONLY*301	?	0.0033	1.71 *	0.0004	0.29	0.0003	0.22
NACONLY*BIGN	?	0.0056	1.04	0.0013	0.44	0.0032	0.98
NACONLY*INST%	?	-0.0125	-3.65 ***	-0.0015	-0.64	-0.0021	-0.75

N = 2541, 348 Levels N = 2690, 371 Levels N = 2209, 309 Levels
QIC 2609 QIC 2728 QIC 2245
QICu 2560 QICu 2709 QICu 2228

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

Table 19 - Interaction Effects – Additional Analyses
The Impact of Director Monitoring Role (ACONLY / NACONLY) and Firm Monitoring
on DIRMV

Sample Variable	Predicted Sign	2000:2005 Param t-stat	2000:2006 Param t-stat	2000:2007 Param t-stat
Intercept	?	-34.7064 -0.89	-29.1724 -1.97**	-26.4929 -1.31
MVE	+	8.2076 3.26***	4.8311 5.15***	6.0809 4.37***
VAR	?	33.1277 0.79	74.9213 4.50***	71.4100 3.28***
GROWTH	+	0.7189 0.09	-0.3054 -0.10	-0.9297 -0.22
CEOTEN	+	-0.6214 -1.21	-0.2574 -1.42	-0.5594 -2.02**
SEG	+	-1.0063 -1.14	-0.4105 -1.23	-0.4271 -0.86
%IND	-	-45.9160 -1.85*	-25.1071 -2.73***	-38.0950 -2.82***
DIRTEN	+	1.8230 3.53***	0.9961 4.56***	1.0489 3.49***
ACONLY	-	21.4229 0.49	13.9280 0.81	18.3042 0.84
NACONLY	+	35.8114 0.99	10.2255 0.69	5.0181 0.27
301	?	0.3517 0.03	3.7139 0.77	8.7766 1.29
BIGN	?	0.0394 0.00	-2.1145 -0.20	0.9641 0.07
INST%	?	6.0727 0.32	6.9317 0.81	0.8759 0.07
ACONLY*301	-	-6.4334 -0.45	-7.6277 -1.20	-11.0828 -1.25
ACONLY*BIGN	+	-2.5418 -0.06	-0.8830 -0.06	-6.3939 -0.32
ACONLY*INST%	+	-11.5176 -0.45	-5.6041 -0.48	-3.3084 -0.20
NACONLY*301	?	20.5690 1.68*	-3.4757 -0.63	-3.7995 -0.50
NACONLY*BIGN	?	15.0164 0.44	0.9836 0.07	2.6324 0.16
NACONLY*INST%	?	-71.6769 -3.27***	-5.3586 -0.53	0.5028 0.03

N = 2541, 348 Levels N = 2690, 371 Levels N = 2209, 309 Levels
QIC 2605 QIC 2746 QIC 2254
QICu 2560 QICu 2709 QICu 2228

GEE parameter estimates are reported along with t-statistics derived from firm-clustered robust standard errors. An exchangeable working correlation matrix is specified assuming that the correlation of director observations within firms is the same. The QIC and the related QICu statistic is also reported for each estimation (QICu approximates QIC when the GEE model is correctly specified). Results are reported for the pooled samples containing firms that had annual meetings in the sample years indicated. *, **, *** represents significance at the 0.10, 0.05, and 0.01 levels, respectively. Continuous variables are winsorized at the 1 and 99th percentiles by year and industry. Variables are defined in Table 3.

APPENDIX B: FIGURES

Figure 1
Summary of the December, 1999 NYSE/NASDAQ “independence” rules
 Note: This table was adapted from Klein (2003).

A director was not deemed “independent” if any of the following situations applied:

NYSE	NASDAQ
an employee for the current or any of the past 3 years	an employee for the current or any of the past 3 years
an immediate family member of an executive of the company ^a	an immediate family member of an executive of the company ^a
a cross-compensation committee interlock ^b	a cross-compensation committee interlock ^b
a business relationship with the firm that the board, using its "business judgment," decides interferes with the director's independent judgment	a business relationship with the firm in which the director received at least \$60,000 in compensation from the firm in the previous year
	a corporate business relationship with the firm in which the director's firm received at least \$200,000 in any of the last 3 years

^aSection 303.0(A) of the NYSE Listed Company Manual and Section 4200(a)(14) and IM-4200 of the NASD Manual define an immediate family member as a person's spouse, parent, child, sibling, mother-in-law, father-in-law, son-in-law and daughter-in-law, and anyone who shares such person's house. The NYSE adds brother- or sister-in-law to the list of immediate family members.

^bSection 303.01(3)(c) of the NYSE and Section 4200(a)(14)(E) of the NASD Manual define a cross-compensation committee interlock as when Director A sits on the compensation committee of the Firm and an inside director of the Firm sits on Director A's Firm's compensation committee.

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