THE INFLUENCE OF AUDITOR MONITORING AND LOSSES ON CHIEF EXECUTIVE OFFICER BONUSES

THE INFLUENCE OF AUDITOR MONITORING AND LOSSES ON CHIEF EXECUTIVE OFFICER BONUSES

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Business Administration

By

Adi Nugroho Susanto Masli
University of Arkansas
Bachelor of Business Administration, 2005
University of Arkansas
Master of Accounting, 2006

August 2011
University of Arkansas

ABSTRACT

I examine whether auditor monitoring influences earnings-based Chief Executive Officer (CEO) bonuses. Seeking higher levels of assurance and verification of the financial statements, boards of directors can demand a greater level of monitoring from their external auditor (Carcello et al. 2002; Abbott et al. 2003). Extant research indicates that there is a positive association between earnings and CEO bonuses; however, such an association ceases to exist when a company incurs a loss. This, suggests that, when earnings are negative, boards deviate from an explicit bonus plan and exercise discretion to determine CEO bonuses. I posit that with the increased verification of earnings from high auditor monitoring, boards will exercise less discretion and focus more on reported earnings to determine CEO bonuses during loss years.

Consistent with my hypothesis, I find that boards with high auditor monitoring lower CEO bonuses as the magnitude of losses increases. When I investigate whether this finding varies with CEO power, I find that, when there is high auditor monitoring, boards reduce CEO bonus pay for more severe losses, but only for CEOs with low levels of power. Overall, the study adds to an emerging body of research that examines the intersection between the executive compensation and auditor monitoring literatures.

This dissertation is approved for recommendation to the Graduate Council.

Dissertation Director:

Dr. Vernon J. Richardson

Dissertation Committee:

Dr. James N. Myers

Dr. Linda A. Myers

Dr. Juan M. Sanchez

Dr. Viswanath Venkatesh

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ACKNOWLEDGEMENTS

I am very thankful for the encouragement, mentorship, and guidance from my dissertation committee. First and foremost, I would like to extend my deepest gratitude to my committee chair, Dr. Vernon J. Richardson. In addition, I extend my sincere thanks to Dr. James N. Myers, Dr. Linda A. Myers, Dr. Juan M. Sanchez, and Dr. Viswanath Venkatesh. I am honored that these exceptional scholars agreed to be on my committee.

I want to thank all my family who supported me throughout the doctoral program: Mom and Dad; my siblings, Eka Masli and Ari Masli; my wife, Adella Simon, and my daughter, Calissa Masli. Their love and encouragement motivated the completion of my accounting doctoral degree .

DEDICATION

I dedicate this dissertation to my family, especially…

to Dad for his example, inspiration, and guidance

to Mom for her encouragement and motivation

to Adella for her love, patience, and support

and

to Calissa, may you also be motivated and encouraged to reach your dreams.

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1. INTRODUCTION

While there are large literatures both on auditor monitoring (e.g., Larcker and Richardson 2004; Hay et al. 2006; Engel et al. 2010) and chief executive officer (CEO) compensation (e.g., Gaver and Gaver 1998; Murphy 1999; Tosi et al. 2000; Cadman et al. 2010), little is known about how auditor monitoring influences CEO compensation (Wysocki 2010). In this study, I investigate whether auditor monitoring influences earnings-based CEO bonus pay.[1]

External auditors have the responsibility to provide assurance that the client's financial statements comply with generally accepted accounting principles (GAAP). In addition, auditors are able to assume monitoring functions that can help mitigate the inherent agency problems within publicly traded companies (Larcker and Richardson 2004). Consequently, boards of directors may demand higher levels of audit quality than audit firms normally provide in order to protect the board reputation capital and promote shareholder interests (Carcello et al. 2002). In particular, since audit committees need to understand the performance metrics used for incentive executive pay to monitor the integrity of those metrics (National Association of Corporate Directors 2010), audit committees can demand a greater level of audit effort from their external auditors (Abbott et al. 2003). This increased demand for monitoring leads to more audit work and to higher audit fees (Carcello et al. 2002; Engel et al. 2010).

According to Bushman and Smith (2001, 258), earnings play three fundamental contracting roles for accounting numbers. These are "directly creating incentives to take actions, filtering common noise from other performance measures (e.g., stock price), and rebalancing managerial effort across multiple activities." Consistent with this view, extant research documents the prevalent use of reported accounting earnings as a determinant of CEO bonuses

[1] As is discussed in more detail later, I use the amount of abnormal audit fees to measure auditor monitoring following Ball et al. (2010).

(e.g., Ittner et al. 1997; Murphy 1999; 2000; Bushman and Smith 2001; Cadman et al. 2010). However, there is also evidence that such an association ceases to exist when the company is operating at a loss. For example, Gaver and Gaver (1998) find that CEO cash compensation is associated with positive earnings, but is shielded from the effects of losses. This provides support for the view that boards tend to apply discretion or subjectivity that "favors" the executive (Gaver and Gaver 1998) and often award bonuses to executives even when performance is mediocre (Bebchuk and Fried 2004, 7).

Losses may be caused by (i) events that are beyond the control of the CEO, (ii) "bad luck" that is unmanageable, and/or (iii) activities that result in current period losses (e.g., restructuring, abandoning unprofitable operations, etc.) but improve long-term prospects of the company (Gaver and Gaver 1998; Gibbs et al. 2004). To the extent that a loss is, to some degree, attributed to such factors, boards may choose to exercise discretion and not rely on quantitative earnings results to determine CEO bonuses (Murphy 1999). Consistent with this conjecture, Gibbs et al. (2004) find that during loss years, companies use subjectivity in awarding bonuses to their executives.[2] In this study, I contend that higher auditor monitoring provides higher verification of reported earnings as well as higher assurance over the underlying economic performance of the company. I examine the possibility that, during loss years, boards of directors with high auditor monitoring exercise less discretion and focus more on reported earnings to determine CEO bonuses.

Following Ball et al. (2010), I use the amount of excess audit fees paid by the company to measure the extent of auditor monitoring. According to Ball et al. (2010, 14), "this test implicitly assumes that an audit is not a standardized commodity determined exclusively by regulation, but

[2] Subjectivity refers to the assignment of bonus pay based on subjective judgments rather than based solely on quantitative performance measures (e.g., earnings).

is a differentiated product that allows client firms to choose their audit firm and various other dimensions of audit quality and effort." My analysis focuses on audit fees paid by companies in the Standard & Poors (S&P) 1500 index with available CEO compensation data from 2004 through 2009.[3] In order to identify those companies that have high auditor monitoring, I first estimate an audit fees determinants model (e.g., Simunic 1980; Hay et al. 2006) to capture the residual level of audit fees. Companies with positive (negative) residuals obtain (do not obtain) high auditor monitoring (Larcker and Richardson 2004).

Next, I examine the influence of auditor monitoring on earnings-based CEO bonuses. After partitioning net earnings into net profits and net losses, I find that, when companies have low auditor monitoring, CEO bonuses are not reduced for more severe net losses, suggesting that, for those CEOs, bonus compensation is not associated with the size of the net loss (Gaver and Gaver 1998). However, I find that when companies have high auditor monitoring, CEO bonuses are reduced for more severe net losses. This suggests that, during loss years, high auditor monitoring reduces the need for boards to practice discretion or subjectivity (Gibbs et al. 2004) in determining CEO bonuses. I also investigate how auditor monitoring influences the association between the components of net earnings and CEO bonuses. Following Gaver and Gaver (1998), I decompose net earnings into i) income from continuing operations and ii) income from nonrecurring transactions.[4] I find that, when companies have with high auditor monitoring, CEO bonuses are reduced for more severe losses from continuing operations.

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[3] Beginning in 2004, there was a change in the nature of the external auditor's audit work because external auditors were required to add a new reporting requirement. Specifically, Public Company Accounting Oversight Board (PCAOB) Standard 2 addresses both the work that is required to audit internal controls over financial reporting and the relationship between the internal controls audit and the financial statement audit.

[4] As discussed in more detail later, income from continuing operations represents earnings before extraordinary items, discontinued operations, and special items, while income from nonrecurring transactions consists of extraordinary items, discontinued operations, and special items.

Overall, my findings imply that not all companies shield CEO bonuses from losses. Rather, during loss years, boards that obtain high auditor monitoring exercise less discretion and rely more on reported earnings to determine CEO bonuses.

The managerial power theory (Bebchuk et al. 2002; Bebchuk and Fried 2004) argues that CEOs can use their power to influence the level and structure of their pay and those managers with greater power can do so more successfully. Consequently, extant studies show that CEOs with superior bargaining power are better able to protect their bonuses when negotiating compensation contracts with the board (Grinstein and Hribar 2004; Henderson et al. 2010). Given such arguments, I re-examine the influence of auditor monitoring on earnings-based CEO bonus pay by splitting my sample based on high versus low CEO power.[5] I find that, when there is high auditor monitoring, boards reduce CEO bonus pay for more severe losses, but only for CEOs with low levels of power. The findings imply that, despite the presence of high auditor monitoring, more powerful CEOs (relative to less powerful CEOs) are better able to protect their bonuses from the effects of losses.

This study contributes to the accounting literature in several ways. First, I contribute to the intersection between the executive compensation and auditor compensation literatures. An emerging line of research investigates the association between audit fees and board of directors compensation (Engel et al. 2010). However, there is a lack of research that examines the influence of audit fees on executive compensation. For example, Wysocki (2010) contends that although executive compensation and audit fees have been two of the most active areas of accounting research, there has surprisingly been little intersection between the two

[5] As discussed in more detail later, I construct a CEO power index that incorporates CEO duality, whether the CEO sits on the board of directors, proportion of insiders on the board, CEO pay slice (Bebchuk et al. 2009), CEO tenure, and board size.

"compensation" literatures. In this study, I provide initial evidence on the association between auditor compensation and CEO bonuses.

Second, I contribute to the literature examining the consequences of auditor monitoring or audit fees. For example, extant studies examine the influence of audit fees on financial reporting behavior (Larcker and Richardson 2004; Caramanis and Lennox 2008), cost of debt (Dhaliwal et al. 2009), cost of capital (Khurana and Raman 2006), and management voluntary disclosure (Ball et al. 2010). I complement this line of research by examining the impact of audit fees on earnings-based CEO bonuses.

Finally, I also contribute to the literature that examines executive bonuses and its related monitoring mechanisms (e.g. Gaver and Gaver 1998; Core et al. 1999; Grinstein and Hribar 2004; Jackson et al. 2008; Henderson et al. 2010). While extant studies conclude that that there is no association between bonuses and earnings when the company reports a loss, the evidence presented herein suggests that this protection is not complete in that losses do "flow through" CEO bonuses when there is high auditor monitoring.

2. BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1. Demand for auditor monitoring

The objective of the external audit is the expression of an opinion on the fairness with which managers present, in all material respects and in conformity with GAAP, the company's financial position, results of operations, and cash flows (American Institute of Certified Public Accountants (AICPA) 1972). Professional standards require auditors to assess client-related risk, such as fraud risk and internal control weaknesses, and to perform auditing procedures designed to reduce audit risk to an acceptable level (Bedard and Johnstone 2004; Raghunandan and Rama 2006).

In addition, Hay et al. (2006) states that the demand for external assurance services, which includes the external audit function, is a function of two factors: (1) the set of risks that affect an organization and its individual stakeholders; and (2) the set of control mechanisms available to mitigate those risks. Stakeholders in an organization may face different risks and have different abilities to controls those risks. One such control that can benefit stakeholders is the external audit process. Consistent with this view, Larcker and Richardson (2004) argue that the auditor plays a key role in the governance process by limiting aggressive financial reporting behavior. They conclude that the auditor constitutes a form of monitoring mechanism that can mitigate the inherent agency problems in publicly traded companies.

The audit committee is directly responsible for appointing, compensating, and overseeing the work of the external auditor, and for resolving disagreements regarding financial reporting between management and the auditor (AICPA 2008). In addition, Securities and Exchange Commission (SEC) rules require all registrants' audit committees to pre-approve all audit and permitted non-audit services provided by the external auditors to the company or to its subsidiaries. Thus, audit committees can either approve specific audit or non-audit services prior to engaging the external auditor or establish preapproval policies and procedures that detail the particular audit services (PricewaterhouseCoopers 2004). The following excerpts from public companies' 2010 audit committee charter illustrates a typical disclosure with respect to the review of the external auditor's scope:

> *The (Audit) Committee shall undertake the following activities in carrying out its oversight responsibilities:*
>
> *"Review and pre-approve all the audit services to be performed, including the Auditors' engagement letter for the annual audit of the Company in accordance with the standards of the Public Company Accounting Oversight Board (United States) and the proposed fees in connection with such audit services."*

"Examine and make recommendations, if any, with respect to the audit scope, plans for (including staffing and budgeting), and the results of, the annual audit conducted by the Auditors."

-Xerox Corporation

The Committee assists the Board in its oversight of the integrity of the Company's financial statements, compliance with legal and regulatory requirements, the qualifications, independence, and performance of the Company's independent registered public accounting firm (the "Independent Accounting Firm"), the performance of the Company's internal auditing department, and furnishes a report for inclusion in the Company's Proxy Statement. In addition, the Committee:

"Appoints, oversees, and approves compensation of the Independent Accounting Firm"

"Reviews with the Independent Accounting Firm the scope of the annual audit, including fees and staffing, and approves all audit and permissible non-audit services provided by the Independent Accounting Firm"

"Reviews findings and recommendations of the Independent Accounting Firm and management's response to the recommendations of the Independent Accounting Firm"

-3M Corporation

Given that audit committees are able to influence the scope and coverage of their auditors' work (DeZoort 1997), audit committees seeking higher levels of assurance can demand a greater level of monitoring than their audit firms would normally provide (Abbott et al. 2003). Simunic (1980) characterizes audit fees as the sum of the cost of audit effort and an expected liability loss component. More specifically, he presents a production view of the audit process, where certain firm-specific factors cause the auditor to perform either more or less work during the engagement.[6] From the board's perspective, the board and its audit committee may seek higher assurance by influencing the level of audit coverage and paying higher audit fees.

[6] Recent accounting research has focused on audit fees in the post Sarbanes-Oxley era. For example, Ghosh and Pawlewicz (2009) examine changes in audit fees around the passage of the Sarbanes-Oxley Act and find that, after controlling for audit and client characteristics, audit fees increased by approximately 74 percent in the post-SOX period. They conclude that the Sarbanes-Oxley Act likely increased both the demand of audit effort and expected legal liability.

Carcello et al. (2002) argue that boards of directors are concerned with effective monitoring and oversight of the financial reporting process. Therefore, they posit that a board that is more concerned with fulfilling its monitoring role may be more supportive of the external audit function and be more likely to insist on an enhanced audit scope and /or more audit services, thus increasing audit fees. Furthermore, Abbott et al. (2003) suggest that audit committees can demand a greater quantity of audit effort from their existing external auditors in order to seek higher levels of assurance. Such demand would result in higher audit fees. In this context, high audit fees should imply that there is greater assurance over the reliability of the company's financial statement information.

Hogan and Wilkins (2008) test the proposition that higher audit fees signal greater auditor effort by examining audit fees in the fiscal year prior to disclosure of internal control deficiencies.[7] They find that audit fees in the fiscal year preceding the year in which the internal control problem was disclosed are significantly higher for companies with internal control deficiencies (relative to those without internal control deficiencies). Hence, they conclude that this difference in audit fees is attributable to auditors increasing their monitoring effort in the presence of increased control risks.

In keeping with the proposition argued by Carcello et al. (2002) and Abbott et al. (2003), a subset of the audit fees literature examines the influence of audit fees on financial reporting behavior and disclosure policies. In doing so, prior work primarily examines three measures of

[7] Hogan and Wilkins (2008) approach their study differently from other researchers who examine the increase in audit fees as a result of Sarbanes-Oxley Act (SOX) Section 404 disclosures (Raghunandan and Rama 2006). They use the SOX Section 302 disclosures and audit fees in prior periods in an effort to measure the auditor's response to increased control risk. Raghunandan and Rama (2006) examine the incremental audit fees resulting from SOX Section 404 documentation and material weaknesses.

audit fees – audit fees, non-audit fees, and total fees.[8] For example, Frankel et al. (2002) examine whether audit fees are associated with earnings management and they examine the market's reaction to the disclosure of audit fees.[9] Although they find a positive association between non-audit fees and various earnings management indicators, they conclude that audit fees are negatively associated with earnings management. In addition, other studies (e.g., Defond et al. 2002; Ashbaugh et al. 2003; Chung et al. 2003) do not find evidence that non-audit fees compromise auditor independence or are positively associated with earnings management. Furthermore, Larcker and Richardson (2004) examine the association between abnormal audit fees (i.e., the extent to which the auditor is being paid more or less than the economic benchmark) and accrual choices.[10] They find that positive abnormal audit fees are associated with lower non-directional accruals and with smaller negative and positive accruals, suggesting that abnormal audit fees are associated with greater earnings quality.

More recently, Ball et al. (2010) use the amount of excess audit fees as a proxy for the extent of financial statement verification, based on the logic that incremental audit effort demanded by a firm will be priced by its auditors. They find evidence suggesting that the resources companies commit to financial statement verification by independent auditors are positively associated with the quality of their management forecasting activity. Finally, Engel et al. (2010) argue that greater complexities and risks within the financial reporting process lead to

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[8] Audit fees consist of all fees necessary to perform the audit or review in accordance with generally accepted auditing standards (GAAS). Non-audit fees are those fees paid to a firm's auditor that are related neither to the audit services performed for the purposes of financial statement, nor to the review services that are customary under GAAS. Total fees include both audit fees and non-audit fees.

[9] Frankel et al. (2002) collect audit fee data from proxy statements filed with the SEC between February 5, 2001 and June 15, 2001.

[10] Larcker and Richardson (2004) examine both abnormal non-audit fees and abnormal total fees.

greater demand for auditor monitoring by company stakeholders, which is reflected in higher fees paid to the auditor.

Although Carcello et al. (2002) and Abbott et al. (2003) suggest that audit fees measure the extent (or quality) of auditor monitoring over the client's financial reporting, several studies find elements of audit fees to be positively associated with the client's cost of capital and cost of debt and suggest that higher audit fees indicate lower independence, which is priced by investors and lenders. For example, Khurana and Raman (2006) argue that higher audit fees (as well as non-audit fees and total fees) paid to auditors reduce auditor independence and audit quality, which in turn, reduce investor perceptions of financial reporting credibility.[11] Consistent with their argument, they find a positive association between audit fees (measured as a proportion of the revenues of either the audit firm or of the practice office through which the audit was conducted) and the client's *ex ante* cost of equity capital. Furthermore, Dhaliwal et al. (2008) focus on a sample of 560 new debt issues and investigate the association between audit fees and the cost of debt.[12] Therefore, Dhaliwal et al. (2008) study a setting in which audited financial statements are presumably relied upon to price the firm's debt. Their findings suggest that total fees and non-audit fees paid to the auditor are associated with a higher cost of borrowing, but only for investment-grade companies.

2.2. Agency theory and CEO compensation

In recent years, there has been great debate and attention over executive compensation policies. Tough stakeholder criticism has focused on excessive pay as well as compensation that is not sufficiently driven by firm performance. For most of the past century, there has been a great divide between executives and the average employee with respect to compensation policies

[11] Khurana and Raman (2006) examine audit fees paid to the Big 5 auditors in 2000 and 2001.
[12] Dhaliwal et al. (2008) examine audit fees in the years 2001 through 2003.

(Hindery 2008). According to the Institute for Policy Studies and United for a Fair Economy (2008), CEOs in the United States, despite the current hard economic times, continue to pocket outlandishly large pay packages. The organization's survey reports that in 2008, the S&P 500 CEOs averaged $10.5 million, which is 344 times the pay of the average American worker. According to Warren Buffett (2006), "Too often, executive compensation in the U.S. is ridiculously out of line with performance. That won't change, moreover, because the deck is stacked against investors when it comes to executive pay." Observers have also referred to excessive pay as a cancer (which has been growing exponentially for almost two decades) that is at the core of many of the country's economic woes (Hindery 2008). These concerns have been deemed to be so crucial that the Obama administration has named a "compensation czar" to set salaries and bonuses at some of the largest U.S. firms as part of a broader government campaign to reshape pay practices across corporate America (Cho et al. 2009).

Excessive executive pay also attracts harsh criticism from firm stakeholders globally. For example, the French government has promised to tackle "scandalous" pay raises and bonus rewards, stating that European Union (EU)-wide regulation may be necessary to limit pay that is not deemed sufficiently linked to company performance (CFO Europe Magazine 2008). In addition, the issue of pay for performance has also sparked a debate among a significant number of executives. In CFO Europe's 2008 Business Outlook Survey, 20 percent of senior finance executives in Europe said that "excessive" executive pay is an issue that may require greater regulatory oversight, while 70 percent believe that regardless of the linkage to performance, pay is a matter for board of directors and shareholders.

Previous research seeking to examine the level of excessive executive compensation typically investigates whether an executive's pay is effectively determined by firm performance.

The intuition for pay for performance comes from agency theory (Jensen and Meckling 1976, Eisenhardt 1985) where the principal delegates work to an agent who performs the work. Agency theory research focuses on identifying situations in which the principal and agent are likely to have conflicting objectives and on describing governance mechanisms that can limit an agent's self-serving behaviors (Eisenhardt 1989).

One such governance mechanism is outcome-based contracts. The idea is that outcome-based contracts co-align the preferences of agents with those of the principal because the rewards for both parties depend on the same actions (Jensen and Meckling 1976; Eisenhardt 1985; 1989). Therefore, when the contract between the principal and agent is outcome-based or performance-based, the agent is more likely to behave in the interests of the principal (Tosi and Gomez-Mejia 1989).

Two specific aspects of the agency problem are relevant to executive pay (Eisenhardt 1985; 1989). First, because of *moral hazard*, managers may not put forth optimal effort (or the agreed-upon effort). Second, because of *adverse selection*, the agent may misrepresent his or her ability, in that the agent may claim to have certain skills or abilities that the principal cannot easily verify. The source of such problems is an asymmetry of information between the principal and agent, which exists because it is impossible or prohibitively costly for the principal to fully observe the agent's actions (Holmstrom 1979; Eisenhardt 1989). In sum, agency theory suggests that, in order to align the interests of executives and shareholders, the principal (i.e., shareholders) should determine the agent's (i.e., manager's) pay to be a positive function of firm performance. Therefore, to the extent that compensation is not linked to performance, deviations are taken as evidence of executives obtaining excessive compensation (Bebchuk and Fried 2004).

In light of the information asymmetry problem, the "informativeness principle" (Holmstrom 1979) states that executive compensation contracts should be based on performance measures that provide useful information about unobserved managerial efforts and actions. Furthermore, Bushman and Smith (2001) argue for the use of accounting earnings numbers as performance measures in managerial compensation contracts. Specifically, they propose three fundamental contracting roles for accounting information: (i) directly creating incentives to take actions, (ii) filtering common noise from other performance measures (e.g., stock price), and (iii) rebalancing managerial effort across multiple activities.

2.3. CEO bonus compensation

Bonus plans represent a component of the CEO's short-term cash compensation (Murphy 1999, 2000; Bushman and Smith 2001). Under the typical bonus plan, a CEO does not receive a bonus payout until a company performance threshold is achieved. Once a CEO meets the performance threshold, he or she receives a bonus that increases with company performance. However, once performance reaches an upper bound or cap, the CEO no longer receives additional bonus payments for improvements in company performance.[13]

Prior studies have documented the extensive and explicit use of accounting numbers in CEO bonus contracts. For example, Murphy (1999) obtains data from a survey that contains detailed information on the annual bonus plans for 177 publicly traded U.S. companies. He finds that 161 of the 177 (91%) sample companies explicitly use at least one measure of accounting profits in their annual bonus plans. In addition, of the 68 companies that use a single performance measure in their annual bonus plan, 65 (96%) use a measure of accounting profits.

[13] Murphy (1999) labels this range between the threshold and cap as the "incentive zone," which indicates the range of performance realizations where incremental improvements in performance correspond to increased bonuses.

Similarly, Ittner et al. (1997) document that 312 of 317 sample companies (98%) report using at least one earnings performance measure in their annual bonus plans. More recently, Cadman et al. (2010) find that 98 percent of their sample companies use accounting earnings as a performance measure in setting CEO bonuses.[14]

Given the prevalence of earnings in setting CEO bonus contracts, prior research suggests that performance-based bonus arrangements can lead to adverse effects. As argued by Healy and Whalen (1999), CEOs are able to exploit their private knowledge and use reporting methods and judgments to engage in financial reporting behavior that may not adequately reflect their companies' underlying performance. Therefore, too much emphasis in improving short-term accounting performance outcomes may result in CEOs manipulating reported earnings numbers to achieve higher bonuses. Similarly, Murphy (1999) argues that there are two fundamental problems with using accounting performance measures in bonus contracts: i) CEOs may take actions that reduce future profitability to improve current profits and ii) accounting profits can be manipulated through discretionary accruals or by shifting earnings components between periods.

Consistent with these views, prior studies suggest that managers use their discretion to increase earnings-based bonus awards. For example, Healy (1985) was among the first to document an association between management's bonus-related incentives and accounting accruals. He finds that managers are more likely to choose income-decreasing accruals when they approach either a bonus plan's upper or lower bounds. Holthausen et al. (1995) and Gaver et al. (1995) later replicate and extend Healy's findings using different methodologies and data

[14] In addition, a recent SEC filing of a Fortune 100 company states: *"For fiscal 2009, the Committee selected Corporate Net Earnings as the primary performance measure for our annual bonus incentive plan because it believes that corporate net earnings growth correlates directly with our business objectives and the creation of fundamental value for our stockholders"* (2009 DEF 14A SEC Filing of a Fortune 100 company).

sources. Consistent with Healy (1985), Holthausen et al. (1995) find that CEOs manipulate earnings downwards when they are at the upper bound of their bonus contracts. However, unlike Healy (1985), they do not find evidence that CEOs manipulate earnings downward when they are below the lower bound of their bonus contracts. In addition, Gaver et al. (1995) use discretionary accruals to measure earnings management and their evidence suggests that when earnings before discretionary accruals fall below the lower bound of the bonus contract, managers select income-increasing discretionary accruals. Finally, Guidry et al. (1999) extend these studies by examining the association between earnings management and earnings-based bonus plans at the business unit level (instead of the aggregate company level). Their findings suggest that business unit managers also manipulate earnings to maximize their short-term bonus payouts.

More recently, Carter et al. (2009) examine the association between earnings changes and executive bonuses surrounding the passage of SOX. They suggest that companies will place more weight on earnings when determining executive bonuses in the post-SOX era (compared to the pre-SOX era) because SOX increased CEO and CFO responsibility for the integrity and reliability of financial reports (and hence, more truthful reporting of earnings results should occur). Consistent with their expectations, Carter et al. (2009) find that companies place significantly more weight on earnings changes in the bonus contract in the post-SOX period.

2.4. Discretionary adjustments and CEO bonus compensation

While annual bonus contracts are largely explicit, prior studies find that boards of directors do make discretionary adjustments to reported earning numbers when making bonus payments. Most notably, Dechow et al. (1994) provide the first empirical evidence that boards of directors make discretionary adjustments to GAAP-based income in determining executive cash

compensation, which includes bonus pay. Specifically, they find that, on average, boards of directors fully shield CEO salary and bonuses from the earnings effect of restructuring charges. Adut et al. (2003) extend the work of Dechow et al. (1994) and argue that the extent of shielding cash compensation from the effects of restructuring charges is contingent upon CEO tenure and the historical pattern of restructuring decisions. Furthermore, Duru et al. (2002) find that boards shield CEO salary and bonuses from the income-decreasing effects of recurring strategic expenditures such as research and development and advertising expenditures.

Of particular interest to this study is the use of discretion in making CEO bonus payments during loss years. Although the positive association between contemporaneously reported earnings and CEO bonus compensation is well documented in the literature, there is empirical evidence suggesting that this association ceases to exist when the company incurs a loss. In early work, Gaver and Gaver (1998) examines the association between earnings and CEO cash compensation by partitioning earnings into: i) positive above the line earnings; ii) negative above the line earnings; iii) positive below the line earnings; and iv) negative below the line earnings.[15] Their findings suggest that CEO salary and bonus compensation is positively associated with above the line earnings when the results are positive (i.e., cash compensation is shielded from the effects of above the line losses). In addition, they find that below the line earnings which increase (decrease) income are associated with (are not associated with) cash compensation. Taken as a whole, the evidence in Gaver and Gaver (1998) suggests that positive income flows through compensation, but losses do not.

[15]Gaver and Gaver (1998) define above the line earnings as earnings before extraordinary items and discontinued operations and below the line earnings as the sum of extraordinary items, discontinued operations, and special items.

Subsequent studies also provide evidence consistent with the argument that boards protect executive bonus compensation from the effects of losses. For example, Matsunaga and Park (2001) do not find a significantly negative relation between CEO bonus compensation and the number of quarters during the year in which the company reports negative earnings, suggesting that losses weaken the relation between bonuses and earnings. In addition, Gibbs et al. (2004) find that the use of subjectivity in bonus contracts becomes relevant when the company is operating at a loss. Overall, extant studies suggest that although annual bonus contracts are largely explicit, boards have significant discretion over CEO bonuses in loss years.

2.5. Auditor monitoring and CEO compensation

Recent accounting research examines the influence of auditor monitoring on corporate compensation policies. Most notably, Engel et al. (2010) examine whether the compensation of audit committee members varies with audit fees (where audit fees measure the demand for auditor monitoring of the financial reporting process). They suggest that demand for auditor monitoring is high when business operations are complex and when the risks of financial misstatement are high. Therefore, these companies should reward higher compensation to their audit committee members because such factors will likely require increased time commitments and increased effort by audit committee members. Consistent with their prediction, Engel et al. (2010) find that audit fees are positively associated with total audit committee compensation and with cash retainers paid to audit committee members.

While Engel et al. (2010) provide evidence on the association between audit fees and audit committee compensation, Wysocki (2010) contends that further research should undertake a focused investigation of the association between audit fees and CEO compensation. Wysocki (2010) outlines several factors that should lead to an association between CEO compensation and

audit fees. These include: complexity, risk, strong governance, managerial entrenchment, and managerial empire building. Wysocki (2010) provides descriptive evidence suggesting a large economic association between the level of CEO compensation and audit fees.

2.6. Hypothesis development

Figure 1 presents a timeline to frame my empirical work. Prior to the end of year t, CEOs and boards of directors (as represented by the compensation committee) negotiate and agree upon a contract to be used in evaluating and rewarding CEO bonuses in year t. In addition, prior to the end of year t, the audit committee contracts and negotiates with the external auditor to provide assurance services. Audit committees choosing to demand greater levels of auditor monitoring may do so during this negotiation process. At the end of year t, the earnings results for the year are determined. After the end of year t, the external auditor completes its audit and renders an opinion on the company's financial statements, and the board finalizes the CEO's bonus for year t. During such time, the board may apply discretion and make adjustments in applying the provisions of the bonus contract.

[Insert Figure 1 here]

The shielding of CEO bonuses from the effects of losses suggests that boards may not regard negative earnings results as a reflection of CEO effort. Specifically, boards may deem a loss to not be attributable to poor managerial performance, but rather to be caused by (i) events that are beyond the control of the CEO, (ii) "bad luck" that is unmanageable, and/or (iii) activities that result in current period losses but improve the long-term prospects of the company (Gaver and Gaver 1998; Gibbs et al. 2004). To the extent that a loss is associated with such factors, boards may choose to deviate from a formulaic bonus plan and exercise discretion in determining bonuses (Jackson et al. 2008). Consistent with this conjecture, Hayes and Schaefer

(2000) find that subjectivity is used when elements of managerial effort are not observable using quantitative performance measures. In addition, results in Gibbs et al. (2004) suggest that the use of subjectivity in the assignment of bonus awards is positively associated with the occurrence of a loss.

When companies incur losses, I expect high auditor monitoring to influence the weight that boards place on earnings in determining CEO bonuses. Extant studies suggest that high auditor monitoring provides high verification of reported earnings as well as high assurance over the underlying economic performance of the company (Larcker and Richardson 2004; Ball et al. 2010).[16] This, in turn, should also lead to higher informativeness about managerial effort. Thus, I posit that, during loss years, boards with high auditor monitoring will exercise less discretion and place greater reliance on reported earnings in determining CEO bonuses.

3. RESEARCH DESIGN

3.1. Sample selection and data sources

To examine the influence of auditor monitoring on earnings-based CEO bonuses during loss years, I begin by identifying company-year observations with available data in the Compustat database from 2004 through 2009. Next, I eliminate company-year observations that do not have audit fees data in the Audit Analytics database from 2004 through 2009. Beginning in 2004, external auditors were required to conduct more extensive audit procedures and adhere to stricter rules, guidelines and standards. Specifically, Public Company Accounting Oversight Board (PCAOB) Standard No.2 added a new reporting requirement for auditors, stating that

[16] Larker and Richardson (2004) find a negative association between the level of excess fees paid to auditors and discretionary accruals, suggesting that higher abnormal fees are associated with higher earnings quality.

additional audit work is required to audit internal controls over financial reporting.[17] Furthermore, the PCAOB limited the extent to which external auditors can rely on the work of others, including internal auditors who may have previously tested the processes (Ettredge et al. 2006). Because of these additional requirements, companies experienced a significant increase in audit fees in 2004. Raghunandan and Rama (2006) report that mean (median) audit fees increased by 86% (128%) between 2003 and 2004.

Next, I require CEO bonus and other compensation data from Execucomp. Thus, I eliminate company-year observations that are not in the annual Execucomp database. Finally, in order to reduce the impact of very small auditors (Larcker and Richardson 2004), I restrict my sample to clients of Ernst & Young, Deloitte & Touche, KPMG, and PricewaterhouseCoopers (i.e., the "Big 4"). My final sample consists of 9,771 company-year observations. Panel A of Table 1 outlines my sample composition.

[Insert Table 1 Here]

Panel B of Table 1 presents the industry classification (by two-digit SIC code) across my sample. In general, sample observation are from a broad spectrum of industries. Companies appear more (less) often from 31 through 40 (91 through 99) two-digit SIC code industries. Panel C of Table 1 provides the distribution across years. With the exception of the 2009 fiscal year, the number of observations per year is approximately 1,700 and is quite uniform across years.

[17] PCAOB Standard No.2 is "one of the most important and far-reaching auditing standards the Board will ever adopt," said PCAOB Chairman William J. McDonough. "In the past, internal controls were merely considered by auditors; now they will have to be tested and examined in detail. That process will add an important protection for investors because solid internal controls are the first line of defense against misconduct and one of the most effective deterrents to fraud." (PCAOB 2004)

3.2. Measure for high auditor monitoring

I posit that higher levels of auditor monitoring are present when boards purchase more audit work from the external auditors. Following Ball et al. (2010), I use the amount of excess audit fees paid to measure the extent of high auditor monitoring, given that incremental audit effort demanded by the board will be priced by the external auditor. Excess audit fees represent fees that are incremental to those deriving from previously identified determinants (Larcker and Richardson 2004; Ball et al. 2010). Thus, I estimate the following ordinary least squares (OLS) regression model and use the residual to capture excess audit fees:

$$\begin{aligned} Ln\ Audit\ Fees_{it} = {} & \beta 0 + \beta 1\ Ln\ Assets_{it} + \beta 2\ Leverage_{it} + \beta 3\ Inherent\ Risk_{it} + \\ & \beta 4\ Restructuring_{it} + \beta 5\ Foreign_{it} + \beta 6\ Merger_{it} + \beta 7\ Restatement_{it} + \\ & \beta 8\ Going\ Concern_{it} + \beta 9\ Loss_{it} + \beta 10\ Audit\ Delay_{it} + \\ & \beta 11\ New\ Auditor_{it} + \beta 12\ Busy\ Season_{it} + \beta 13\ CEO\ is\ Chairman_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

The p-values are computed based on robust standard errors that are adjusted for heteroskedasticity and firm clustering (White 1980; Cameron et al. 2006; Thompson 2006; Petersen 2009). Furthermore, I include industry and year fixed effects to control for the influence of industry characteristics and overall macroeconomic factors over time.

The dependent variable is measured as the log of total audit fees (*Ln Audit Fees*) as in prior studies (Hay et al. 2006; Raghunandan and Rama 2006; Ghosh and Pawlewicz 2009). In determining total audit fees, I only include fees directly related to audit services and exclude fees related to supplemental auditor work. Extant audit fees determinant models generally follow the approach in Simunic (1980) and include various measures of client size, leverage, risk, and complexity. My proxy for size is the log of total assets (*Ln Assets*). I include company leverage, *Leverage*, measured as total debt divided by total assets. To measure inherent risk, I include the proportion of total asset in accounts receivables and inventory (*Inherent Risk*). To measure complexity of the company's operations, I include (i) *Foreign*, set to 1 if the company reports

foreign exchange income/loss during the year, 0 otherwise (ii) *Restructuring*, set to 1 if the company incurs restructuring charges in the year, 0 otherwise, and (iii) *Merger*, set to 1 if the company engaged in a merger and acquisition activity in the year, 0 otherwise. I include *Restatement*, set to 1 if the company announced a restatement during the year, 0 otherwise, to control for financial reporting risk. To control for the company's overall financial health, I include *Going Concern*, set to 1 if the company received a going concern opinion in the year, 0 otherwise, and *Loss,* set to 1 if the company reports negative net income, 0 otherwise.

To control for the efficiency of the audit, I include *Audit Delay*, measured as the elapsed time from the balance sheet date to the issuance of the audit report. Because a longer audit delay is likely to indicate problems during the course of the audit, difficulties in resolving sensitive audit issues, or more complex financial reports (Knechel and Payne 2001; Ettredge et al. 2006; Hay et al. 2006), audit delays are expected to increase audit fees. Because auditors may change auditors in hopes of obtaining a reduced fee from a new audit firm (Hay et al. 2006),[18] I include *New Auditor* set to 1 if the company retained a new auditor during the year, 0 otherwise. Furthermore, if the audit is conducted during the "busy season" (i.e., the point in the year when most companies have their fiscal year ends (generally December 31)), it may be more costly (e.g., because the audit staff must to work overtime), necessitating an increase in audit fees (Hay et al. 2006). Hence, I include *Busy Season* set to 1 if the client's fiscal year-end month is December, and 0 otherwise. Finally, Tsui et al. (2001) argue that the separation of the CEO and Chairman of the Board positions is likely to result in more effective board monitoring, lower control risks, and lower audit fees. As such, I include *CEO is Chairman,* set to 1 if the CEO is

[18] Hay et al. (2006, 176) suggest that "lower audit fees may be due to new audit firms intentionally offering services at a discount in order to win new business or because a new auditor can offer more efficient services, justifying a fee reduction."

also Chairman of the Board, 0 otherwise. Finally, *i* and *t* represent company and year subscripts, respectively.

3.3. Auditor monitoring and earnings-based CEO bonuses

In order to explore whether high auditor monitoring influences the association between earnings and CEO bonuses, I model CEO bonuses as a function of economic determinants, earnings performance, and my measure for high auditor monitoring. In structuring the model, I follow the earnings-based pay model in Cadman et al. (2010) and estimate the following Tobit regression model:

$$\begin{aligned} \textit{CEO Bonus Ratio}_{it} = {} & \rho 0 + \rho 1\ \textit{Net Profit}_{it} + \rho 2\ \textit{Net Loss}_{it} + \rho 3\ \textit{High AuditorMonitoring}_{it} + \\ & \rho 4\ \textit{Net Profit}_{it} * \textit{High Auditor Monitoring}_{it} + \\ & \rho 5\ \textit{Net Loss}_{it} * \textit{High Auditor Monitoring}_{it} + \rho j\ \textit{CONTROLS}_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

The p-values are computed based on robust standard errors that are adjusted for heteroskedasticity and firm clustering (White 1980; Cameron et al. 2006; Thompson 2006; Petersen 2009). I also include industry and year fixed effects to control for the effects of industry characteristics and overall macroeconomic factors over time.[19]

In the above model (equation 2), the dependent variable is measured using two different measures of CEO bonus. To control for the size (or scale) effect of the CEO's cash compensation and total compensation, *CEO Bonus Ratio* is measured as either (i) CEO bonus divided by CEO cash compensation or (ii) CEO bonus divided by CEO total compensation. Gaver and Gaver (1998) find that the coefficient on earnings varies with the sign of earnings. Thus, I partition net earnings into positive earnings and negative earnings (Jackson et al. 2008). *Net Profit* is defined

[19] As an alternative specification, I include a "Trend" variable instead of year fixed effects, where Trend is defined as a linear trend measured as the difference between the current year and 2002. The untabulated results using this trend variable are virtually identical to those using year fixed effects.

as net earnings if net earnings > 0, and 0 otherwise, while *Net Loss* is defined as (-1) * net earnings if net earnings < 0, and 0 otherwise.[20] *High Auditor Monitoring* is set to 1 if the company's excess audit fees is greater than 0, 0 otherwise. Thus, a value of 1 indicates that the company paid a greater amount of audit fees than the predicted level, implying the presence of high auditor monitoring (Ball et al. 2010). The coefficient on the interaction of *Net Loss * High Auditor Monitoring* tests the influence of high auditor monitoring on the association between the CEO bonus ratio and net losses. A negative and significant coefficient on the interaction term is consistent with the notion that boards with high auditor monitoring reduce CEO bonuses the more severe the net loss.

CONTROLS represents a vector of variables that are hypothesized to affect CEO bonuses (Murphy 1999, 2000; Ittner et al. 1997; Cadman et al. 2010; Henderson et al. 2010). I include the following variables: *Ln Assets*, which is the log of total assets; *BTM*, measured as the book to market ratio; *Market Return*, defined as industry-adjusted (2-digit SIC) returns; *Long Debt* measured as long-term debt divided by total assets; *Restructuring*, set to 1 if the company incurred restructuring charges in the year, 0 otherwise; *Merger* set to 1 if the company is involved in a merger and acquisition in the year, 0 otherwise; and cash constraints, *Cash Shortfall*, calculated as common and preferred dividends plus cash flow from investing minus cash flow from operations, all divided by total assets. I also include managerial influence and the company's overall governance environment (Ittner et al. 1997; Core et al. 1999) given that both may influence CEO bonuses. I control for *CEO Tenure*, measured by the number of years a CEO has been in office; *CEO on BOD*, set to 1 if the CEO sits on the board of directors, 0 otherwise; and *CEO is Chairman*, set to 1 if the CEO is also Chairman of the Board, 0 otherwise. To reflect

[20] I multiply net earnings by (-1), so that negative net earnings enter the regression with a positive sign. Thus, a larger value indicates a larger loss.

the corporate governance environment, I include the number of directors that sit on the board (*Board Size*); *Board Independence*, measured as the number of outside directors divided by the total number of directors; *Old Directors*, measured as the number of directors above 70 years of age divided by the total number of directors; and *Inside Own,* measured as the percentage of company shares beneficially held by insiders (i.e., management and board of directors). Finally, *i* and *t* represent company and year subscripts, respectively.

To assess the influence of high auditor monitoring on the association between CEO bonuses and the components of earnings during profit and loss years, I estimate the following Tobit regression model:

$$\begin{aligned} \textit{CEO Bonus Ratio}_{it} = {} & \mu 0 + \mu 1\ \textit{INCBEDS Profit}_{it} + \mu 2\ \textit{INCBEDS Loss}_{it} + \\ & \mu 3\ \textit{NONRECC Gain}_{it} + \mu 4\ \textit{NONRECC Loss}_{it} + \\ & \mu 5\ \textit{High Auditor Monitoring}_{it} + \\ & \mu 6\ \textit{INCBEDS Profit}_{it} * \textit{High Auditor Monitoring}_{it} + \\ & \mu 7\ \textit{INCBEDS Loss}_{it} * \textit{High Auditor Monitoring}_{it} + \\ & \mu 8\ \textit{NONRECC Gain}_{it} * \textit{High Auditor Monitoring}_{it} + \\ & \mu 9\ \textit{NONRECC Loss}_{it} * \textit{High Auditor Monitoring}_{it} + \\ & \mu j\ \textit{CONTROLS} + \varepsilon it \end{aligned} \qquad (3)$$

The p-values are computed based on robust standard errors that are adjusted for heteroskedasticity and firm clustering (White 1980; Cameron et al. 2006; Thompson 2006; Petersen 2009). I also include industry and year fixed effects to control for the effect of industry characteristics and overall macroeconomic factors over time.

In equation(3), I decompose net earnings into (i) income from continuing operations (*INCBEDS*), defined as net earnings before extraordinary items, discontinued operations, and special items and ii) income from nonrecurring transactions (*NONRECC*), defined as the sum of extraordinary items, discontinued operations, and special items. *INCBEDS Profit* is defined as *INCBEDS* if *INCBEDS* > 0, and 0 otherwise, while *INCBEDS Loss* is defined as (-1) *

INCBEDS if *INCBEDS* < 0, and 0 otherwise. *NONRECC Gain* is defined as *NONRECC* if *NONRECC* > 0, and 0 otherwise, while *NONRECC Loss* is defined as (-1) * *NONRECC* if *NONRECC* < 0, and 0 otherwise. All control variables are defined the same as above. The coefficient on the interaction *INCBEDS Loss * High Auditor Monitoring* (*NONRECC Loss * High Auditor Monitoring)* tests the influence of high auditor monitoring on the association between CEO bonuses and losses from continuing operations (nonrecurring losses). Negative and significant coefficients on these interaction terms suggest that boards with high auditor monitoring reduce CEO bonuses when losses from continuing operations and nonrecurring losses are larger.

4. RESULTS

4.1. Descriptive statistics

Table 2 provides the descriptive statistics. As shown in Panel A of Table 2, the mean of *Audit Fees* (*Ln Audit Fees*) is $3,860,177 (14.545). With respect to reported earnings, the mean of *Net Profit* (*Net Loss*) is 0.056 (0.019), suggesting that companies in the sample report higher absolute positive net earnings than negative net earnings. The mean of *INCBEDS Profit* (*INCBEDS Loss*) is 0.061 (0.008), suggesting that companies in the sample report higher absolute positive earnings from continuing operations than negative earnings from continuing operations. In addition, the mean of *NONRECC Gain (NONRECC Loss)* is 0.003 (0.018), indicating that companies in the sample report higher absolute negative income from nonreccuring transactions than positive income from nonreccuring transactions. Sample company CEOs, on average, receive approximately $612,000 in bonuses, which is approximately 11% (23%) of their total compensation (total cash compensation).

[Insert Table 2 Here]

Panel B of Table 2 reports mean audit fees, CEO bonus pay, and the components of earnings over time. First, consistent with the notion that the costs of implementing the various requirements of SOX were incurred over multiple years, audit fees are generally increasing over the sample period. Furthermore, I find substantial decreases in *CEO Bonus*, *CEO Bonus/Cash Compensation*, *CEO Bonus/Total Compensation*, and *Ln CEO Bonus* beginning in 2006. Specifically, I find that *CEO Bonus*, *CEO Bonus/Cash Compensation*, *CEO Bonus/Total Compensation*, and *Ln CEO Bonus* decreased by approximately 60% from 2005 to 2006. In addition, over the 2006 through 2009 sample period, these CEO bonus measures continued to decrease in each year. Consistent with the notion that CEO bonuses are primarily determined by accounting earnings, I find that the decreasing rate of CEO bonuses coincides with decreases in earnings over the 2006 through 2009 sample period. That is, *Net Profit*, *INCBEDS Profit*, and *NONRECC Gain* (*Net Loss*, *INCBEDS Loss*, and *NONRECC Loss*) are generally decreasing (increasing) over the 2006 through 2009 sample period.

Table 3 presents descriptive statistics for CEO bonuses conditioned on loss and profit years. There are 1,647 company-year observations with negative net earnings but 35% of their CEOs receive bonuses. The mean CEO bonus (natural log of CEO bonus) for company-year observations with negative net earnings is $333,851 (2.053). This represents 14.8% of total cash compensation and 6.9% of total compensation. Excluding those observations in which the CEO does not receive a bonus payout, the mean CEO bonus (natural log of CEO bonus) for company-year observations with negative net earnings is $ $964,654 (5.932). This represents 42.5% of total cash compensation and 19.8% of total compensation. Furthermore, there are 8,121 company-year observations with positive net earnings and 49.80% of their CEOs receive bonuses. The mean CEO bonus (natural log of CEO bonus) for company-year observations with

positive net earnings is $668,498 (3.191). This represents 24.9% of total cash compensation and 12.2% of total compensation. Excluding those observations in which the CEO does not receive a bonus payout, the mean CEO bonus (natural log of CEO bonus) for company-year observations with positive net earnings is $ $1,342,450 (6.408). This represents 50.1% of their total cash compensation and 24.5% of their total compensation.

[Insert Table 3 Here]

In sum, Table 3 shows that CEOs are more likely to receive bonuses (and receive larger bonuses) when their companies report positive net earnings than when they reports losses. However, the descriptive analyses presented in Table 3 are also consistent with the views often expressed by critics of corporate compensation policies who contend that CEOs often receive bonus compensation despite reporting poor or negative earnings (Bechuk et al. 2002; Jackson et al. 2008).

4.2. Determinants of audit fees

Table 4 provides the results of estimating the audit fees determinants model (equation (1)). The explanatory power of the model is consistent with that in prior research (see Hay et al. 2006). Overall, the model does well to predict the expected level of audit fees.

[Insert Table 4 Here]

In general, I find that the variables have the correct signs and significance levels. Specifically, I find that the coefficient estimates on *Ln Assets* and *Leverage* are positively associated with audit fees, suggesting that company size and leverage are both significant determinants of the level of audit fees. Furthermore, I find that the coefficient estimates on the variables relating to client complexity (i.e., *Restructuring*, *Foreign*, and *Merger*), financial reporting risk (*Restatement*) and *Inherent Risk* are all positive and significant. With respect to the

overall financial health of the company, I find that the coefficient estimate on *Loss* is positive and significant, while the coefficient estimate on *Going Concern* is not significant.

Next, I find that the variables relating to the auditor engagement are significantly associated with audit fees. First, consistent with the notion that longer audit delays are likely to drive up the cost of the audit, I find that the coefficient estimate on *Audit Delay* is positively associated with audit fees. Furthermore, companies that change auditors (*New Auditor*) incur lower audit fees, while *Busy Season* is positively associated with audit fees, suggesting that audits for companies with December year-ends are more costly. Finally, Tsui et al. (2001) demonstrate that companies with boards that have CEOs as chairmen pay higher audit fees. Consistent with Tsui et al. (2001), I find a positive association between audit fees and *CEO is Chairman*.

4.3. High auditor monitoring, CEO bonuses, and losses

In Table 5, I conduct a portfolio analysis of CEO bonus compensation based on net earnings and auditor monitoring. As shown in Panel A and Panel B of Table 5, when high auditor monitoring is present, the mean CEO bonus ratio for companies with high net losses is significantly lower than that for companies with low (and mid) net losses. However, when high auditor monitoring is not present, I find no difference in the mean CEO bonuses across the three portfolios. Furthermore, for companies with large net losses, I find that mean CEO bonus compensation is significantly lower when high auditor monitoring is present than when high auditor monitoring is not present. Taken together, these univariate tests suggest that CEOs with high auditor monitoring receive lower bonuses when losses are larger.

[Insert Table 5 Here]

As shown in Panel C and Panel D of Table 5, when high auditor monitoring is present, the mean CEO bonus ratio for companies with high net profits is significantly higher than that of companies with low net profits but not significantly different from that of companies with mid net profits. Furthermore, when high auditor monitoring is not present, the mean CEO bonus ratio for companies with high net profits is significantly higher than that of companies with low (and mid) net profits. Therefore, the univariate results suggest that CEOs with high auditor monitoring and CEOs with low auditor monitoring receive larger bonuses when net profits are higher.

[Insert Table 6 Here]

Table 6 reports the results of estimating equation (2). The dependent variable for Model 1 through Model 3 in Panel A (Panel B) is CEO bonus divided by total cash compensation (CEO bonus divided by total compensation). *Net Loss* captures the association between negative earnings and CEO bonuses for companies with low auditor monitoring. The interaction *Net Loss * High Auditor Monitoring* captures the incremental impact of high auditor monitoring on the association between net losses and CEO bonuses. The coefficient estimates on *Net Loss* in all of the models are insignificant, suggesting that for companies with low auditor monitoring, boards protect CEO bonuses from the effects of net losses. In all of the models, the coefficient estimates on *Net Loss * High Auditor Monitoring* are significantly negative (p-values < 0.01). Thus, the results suggest that CEOs of companies with high auditor monitoring (relative to those with low auditor monitoring) receive lower bonuses as the magnitude of net losses increases.

Furthermore, the coefficient estimates on *Net Profit* in all models are significantly positive (p-values < 0.05), suggesting that for companies with low auditor monitoring, bonuses are increasing in net profits. However, the coefficient estimates on *Net Profit * High Auditor*

Monitoring are insignificant, suggesting that high auditor monitoring does not have an incremental effect on the association between net profits and CEO bonuses.

Table 7 reports the results of estimating equation (3). The dependent variable for Model 1 through Model 3 in Panel A (Panel B) is CEO bonus divided by total cash compensation (CEO bonus divided by total compensation). *INCBEDS Loss (NONRECC Loss)* captures the association between negative income from continuing operations (losses from nonrecurring transactions) and CEO bonuses for companies with low auditor monitoring. The interaction *INCBEDS Loss * High Auditor Monitoring* (*NONRECC Loss * High Auditor Monitoring*) captures the incremental impact of high auditor monitoring on the association between losses from continuing operations (from nonrecurring transactions) and CEO bonuses. The coefficient estimates on *INCBEDS Loss (NONRECC Loss)* in all models are insignificant, suggesting that for companies with low auditor monitoring, boards protect CEO bonuses from the effects of losses from continuing operations (and losses from nonrecurring transactions).

[Insert Table 7 Here]

The coefficient estimates on *INCBEDS Loss * High Auditor Monitoring* in all models are significantly negative (p-values < 0.10). With respect to losses from nonrecurring transactions, the coefficient estimates on *NONRECC Loss * High Auditor Monitoring* are not significantly negative. Taken together, the results suggest that CEOs of companies with high auditor monitoring (relative to those with low auditor monitoring) receive lower bonuses when losses from continuing operations are more severe. There is no evidence to suggest that high auditor monitoring influences the association between CEO bonuses and losses from nonrecurring transactions.

Furthermore, the coefficient estimates on *INCBEDS Profit* and *NONRECC Gain* in all models are significantly positive (p-values < 0.10), suggesting that for companies with low auditor monitoring, bonuses are increasing in positive above and below the line earnings. However, the coefficient estimates on *INCBEDS Profit * High Auditor Monitoring* and *NONRECC Profit * High Auditor Monitoring* are insignificant, suggesting that high auditor monitoring does not have an incremental effect on the association between CEO bonuses and earnings from continuing operations (or earnings from nonrecurring transactions).

4.4. Total fees as the measure for auditor monitoring

My analysis thus far uses excess audit fees to measure high auditor monitoring. However, it is also possible that high auditor monitoring is captured by the excess amount of total fees (i.e., audit fees + non-audit fees) paid to the external auditor (Larcker and Richardson 2004). Therefore, I re-estimate equation (1) using the natural log of total fees as the dependent variable and calculate its estimated residual. I then define high auditor monitoring to be 1 if the residual is positive (0 otherwise) and then re-estimate equations (2) and (3). The outcomes from re-estimating equation (2) and equation(3) using this specification are reported in Table 8 and Table 9, respectively.

[Insert Table 8 Here]

The dependent variable for Model 1 through Model 3 in Panel A (Panel B) of Table 8 is CEO bonus divided by total cash compensation (CEO bonus divided by total compensation). In all models, the coefficient estimates on *Net Loss * High Auditor Monitoring* are significantly negative (p-values < 0.01).

[Insert Table 9 Here]

The dependent variable for Model 1 through Model 3 in Panel A (Panel B) of Table 9 is CEO bonus divided by total cash compensation (CEO bonus divided by total compensation). The coefficient estimates on *INCBEDS Loss * High Auditor Monitoring* in all models are significantly negative (p-values < 0.05). With respect to losses from nonrecurring transactions, the coefficient estimates on *NONRECC Loss * High Auditor Monitoring* are not significantly negative.

In sum, using excess total fees (instead of excess audit fees) to measure auditor monitoring, I continue to find that boards with high auditor monitoring (relative to those with low auditor monitoring) reduce the level of CEO bonuses as the severity of net losses (and losses from continuing operations) increases.

4.5. Supplemental Analysis

4.5.1. The effect of CEO power and influence

While the optimal contracting approach suggests that CEO compensation policies are designed to minimize the agency costs that exist between CEOs and shareholders, the managerial power theory (Bebchuk et al. 2002; Bebchuk and Fried 2004) argues that CEOs have the ability to use their power and influence to determine the level and structure of their pay and those CEOs with greater power are able do so more successfully. In other words, this perspective suggests that CEOs are able to influence their own compensation schemes.

According to Bebchuk et al. (2002, 754), the managerial power approach contends that "compensation arrangements approved by boards often deviate from optimal contracting because directors are captured or subject to influence by management, sympathetic to management, or simply ineffectual in overseeing compensation." Extant studies demonstrate findings that are consistent with this conjecture. For example, Grinstein and Hribar (2004) examine the influence

of CEO power on CEO bonuses during mergers and acquisitions. They find that the market perceives merger and acquisitions to be bad news when the CEO possesses broad power within the company. More importantly, consistent with the argument that managerial power enables the extraction of rents by CEOs, they find that CEOs with greater power attain higher cash bonuses despite these more negative market reactions.

Henderson et al. (2010) examine the influence of CEO power on the association between layoffs and CEO compensation. They argue that public scrutiny and political pressures associated with both CEO compensation and layoffs would cause boards to change the structure of CEO compensation by reducing bonus pay and increasing equity-based compensation in layoff years. While they provide evidence to this argument, they also report that CEO power influences the extent of compensation substitution in response to layoffs. Specifically, their evidence suggests that more powerful CEOs, relative to less powerful CEOs, experience smaller bonus reductions and a higher probability of receiving bonuses.

The above discussion suggests that the influence of high auditor monitoring on the association between CEO bonuses and losses may not be uniform across CEOs. To test this prediction, I re-estimate equation (2) and equation (3) by splitting the sample on high versus low CEO power. Because CEO power may not be fully captured by a one dimensional measure (Henderson et al. 2010), I construct a CEO Power Index by taking the sum of six dichotomous CEO power indicator variables (thus, CEO Power Index ranges from 0 to 6). The six variables included in the index are based upon extant literature (e.g., Hill and Phan 1991; Yermack 1996; Core et al. 1999; Klein 2002; Grinstein and Hribar 2004; Bebchuk et al. 2009; Henderson et al. 2010). Specifically, I consider whether the CEO sits on the board of directors (equals 1 if CEO is on the board, 0 otherwise); whether the CEO is also the chairman (equals 1 if CEO is chairman,

0 otherwise); whether the fraction of insiders on the board is above or below the sample median (equals 1 if fraction of insiders is higher than the median, 0 otherwise); whether the CEO pay slice (CPS) is above or below the sample median (equals 1 if CPS is higher than the median, 0 otherwise);[21] whether CEO tenure is above or below the sample median (equals 1 if CEO tenure is higher than the median, 0 otherwise); and whether the board size is above or below the sample median (equals 1 if board size is higher than median board size, 0 otherwise).

Table 10 presents the results of the above estimation process. The High CEO Power Index sample includes company-year observations with a CEO Power Index greater than the sample median while the Low CEO Power Index sample includes company-year observations with a CEO Power Index lower than or equal to the sample median.

[Insert Table 10 Here]

The dependent variable for Panel A (Panel B) is CEO bonus divided by CEO cash compensation (CEO bonus divided by CEO total compensation). *Net Loss* (*INCBEDS Loss*) {*NONRECC Loss*} captures the association between negative earnings (negative earnings from continuing operations) {negative earnings from nonrecurring transactions} and CEO bonuses for companies with low auditor monitoring. The interaction *Net Loss * High Auditor Monitoring* (*INCBEDS Loss * High Auditor Monitoring*) {*NONRECC Loss * High Auditor Monitoring*} captures the incremental influence of high auditor monitoring on the association between negative earnings (negative earnings from continuing operations) {negative earnings from nonrecurring transactions} and CEO bonuses.

As reported in Panel A and Panel B, the coefficients on *Net Loss* in all models are insignificant, suggesting that, regardless of CEO power, boards protect CEO bonuses from the

[21] CEO pay slice is measured as the CEO's total compensation divided by total compensation of the top five executives (Bebchuk 2009).

effects of net losses when auditor monitoring is low. Furthermore, in both Panel A and Panel B, I find that the coefficients on *Net Loss * High Auditor Monitoring*, *INCBEDS Loss * High Auditor Monitoring*, and *NONRECC Loss * High Auditor Monitoring* are insignificant for the high CEO power index sample. With respect to the low CEO power index sample, Panel A and Panel B reveal that the coefficients on *Net Loss * High Auditor Monitoring* and *INCBEDS Loss * High Auditor Monitoring* are significantly negative (p-values < 0.10).

In sum, the results indicate that boards with high auditor monitoring (compared to those with low auditor monitoring) reduce the level of CEO bonuses as the severity of net losses (and losses from continuing operations) increases, but only for CEOs with low levels of power. Therefore, despite the presence of high auditor monitoring, CEOs with higher levels of power are able to protect their bonuses from the effects of losses.

4.5.2. Examination of the Pre-2004 era

As documented in prior work (e.g., Raghunandan and Rama 2006; Ghosh and Pawlewicz 2009), there was a structural change in the nature of auditor responsibilities, auditor effort, and audit fees beginning in 2004. Raghunandan and Rama (2006) document that average audit fees increased significantly in 2004 and suggest that auditors increased the extent of their audit scope and audit work due to new regulations (i.e., PCAOB Standard No.2; Section 404 of Sarbanes-Oxley). In light of this, I examine the influence of high auditor monitoring on the association between losses and CEO bonuses for the period before such changes occurred (i.e., fiscal years 2000 through 2003).[22]

For the 2000 through 2003 sample period, I re-estimate equation (1) using the natural log of audit fees as the dependent variable and calculate its estimated residual. I then define high

[22] Audit fees are available Audit Analytics beginning in 2000.

auditor monitoring to be 1 if excess audit fees is positive (0 otherwise) and re-estimate equations (2) and (3). The outcomes of estimating equation (2) and equation (3) using this specification are reported in Table 11 and Table 12, respectively.

[Insert Table 11 Here]

The dependent variable for Model 1 and Model 2 in Table 11 is CEO bonus divided by total cash compensation and CEO bonus divided by total compensation, respectively. *Net Loss* captures the association between negative earnings and CEO bonuses for companies with low auditor monitoring, while the interaction *Net Loss * High Auditor Monitoring* captures the incremental influence of high auditor monitoring on the association between negative earnings and CEO bonuses.

The coefficients on *Net Loss* in all models are insignificant, suggesting that for companies with low auditor monitoring, boards protect CEO bonuses from the effects of net losses. Furthermore, the coefficients on *Net Loss * High Auditor Monitoring* in all models are also insignificant. Therefore, the results suggest that, in the pre-2004 era, CEOs of companies with high auditor monitoring (compared to those with low auditor monitoring) do not receive lower bonuses as the magnitude of net losses increases. These results contradict the findings of post-2004 era, where CEOs of companies with high auditor monitoring (compared to those with low auditor monitoring) receive lower bonuses as the magnitude of net losses increases.

[Insert Table 12 Here]

The dependent variable for Model 1 and Model 2 in Table 12 is CEO bonus divided by total cash compensation and CEO bonus divided by total compensation, respectively. *INCBEDS Loss (NONRECC Loss)* captures the association between negative earnings from continuing operations (negative earnings from nonrecurring transactions) and CEO bonuses for companies

with low auditor monitoring. The interaction *INCBEDS Loss * High Auditor Monitoring* (*NONRECC Loss * High Auditor Monitoring*) captures the incremental impact of high auditor monitoring on the association between negative earnings from continuing operations (negative earnings from nonrecurring transactions) and CEO bonuses.

The coefficients on *INCBEDS Loss (NONRECC Loss)* in all models are insignificant, suggesting that for companies with low auditor monitoring, boards protect CEO bonuses from the effects of losses from continuing operations (and losses from nonrecurring transactions). In addition, the coefficient estimates for *INCBEDS Loss * High Auditor Monitoring* and *NONRECC Loss * High Auditor Monitoring* in all models are insignificant. Therefore, the results suggest that, in the pre-2004 era, CEOs of companies with high auditor monitoring (compared to those with low auditor monitoring) do not face a greater reduction in bonuses for more severe losses from continuing operations (or nonrecurring transactions). These results contradict the findings of the post-2004 era, where CEOs of companies with high auditor monitoring (compared to those with low auditor monitoring) receive lower bonuses for more severe losses from continuing operations.

Overall, the evidence in Table 11 and Table 12 indicates that, only in the 2004 through 2009 sample period (when external auditors were required to perform more exhaustive assurance work and adhere to more rigorous PCAOB audit standards and guidelines) do boards with high auditor monitoring (compared to those with low auditor monitoring) rely more on reported earnings to determine CEO bonuses during loss years.

5. CONCLUSION

As suggested by Wysocki (2010), there are two large and influential areas of accounting research that separately investigate the determinants of corporate compensation policies and of

audit fees. However, little research has examined the influence of audit fees on corporate compensation. One exception is Engel et al. (2010), which documents a positive association between audit fees and audit committee pay. My study extends this work by investigating the influence of auditor monitoring on earnings-based CEO bonuses.

Extant studies find that CEO cash compensation is shielded from the effects of losses, suggesting that boards of directors exercise discretion and subjectivity over bonuses when companies report a loss (Gaver and Gaver 1998; Murphy 1999; Gibbs et al. 2004). Given that high auditor monitoring provides high verification of reported earnings and high assurance over the underlying economic performance of the company (Larcker and Richardson 2004; Ball et al. 2010), I expect boards with high auditor monitoring to exercise less discretion and rely more on reported earnings to determine CEO bonuses during loss years. The evidence supports this conjecture. Specifically, I find that boards with high auditor monitoring (relative to those with low auditor monitoring) reduce CEO bonuses for more severe net losses (and losses from continuing operations), suggesting the absence of bonus shielding from the effects of losses. However, subsequent analysis demonstrates that these finding are exclusive to CEOs with lower levels of power and to the 2004 through 2009 sample period. Overall, the study adds to a nascent body of literature that examines the association between audit fees and corporate compensation.

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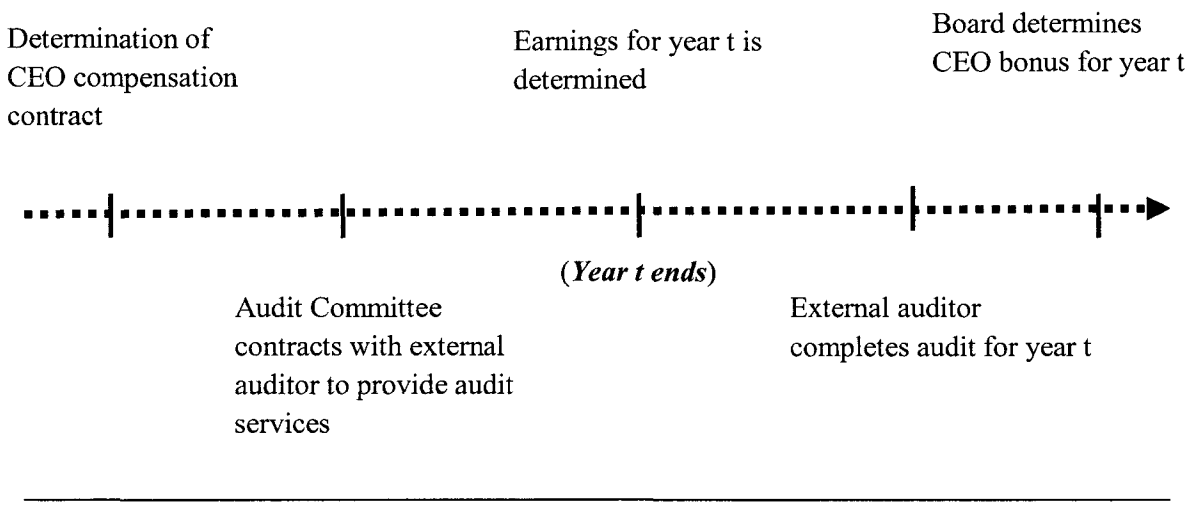
Figure 1.
Timeline of events



Appendix A - Variable Definitions

Audit Fees	=	the dollar amount of audit fees
Ln Audit Fees	=	the natural log of audit fees
High Auditor Monitoring	=	indicator variable set to 1 if the residual of the audit fees determinants model is positive, 0 otherwise
CEO Bonus	=	the dollar amount of CEO bonus compensation in $000
CEO Bonus/ Cash Compensation	=	CEO bonus compensation divided by CEO cash compensation
CEO Bonus/ Total Compensation	=	CEO bonus compensation divided by CEO total compensation
Ln CEO Bonus	=	the natural log of CEO bonus compensation
Net Profit	=	net earnings divided by total assets if the amount in positive, 0 otherwise
Net Loss*	=	(-1) * net earnings divided by total assets if the amount in negative, 0 otherwise
INCBEDS Profit	=	earnings before extraordinary items, discontinued items, & special items divided by total assets if the amount in positive, 0 otherwise
INCBEDS Loss*	=	(-1) * earnings before extraordinary items, discontinued items, & special items divided by total assets if the amount in negative, 0 otherwise
NONRECC Gain	=	(extraordinary items + discontinued items + special items) divided by total assets if the amount in positive, 0 otherwise
NONRECC Loss*	=	(-1) * (extraordinary items + discontinued items + special items) divided by total assets if the amount in negative, 0 otherwise

Appendix A - Variable Definitions (Continued)

Ln Assets	=	the natural log of total assets
Leverage	=	total liabilities divided by total assets
Inherent Risk	=	(receivables + inventory) divided by total assets
Restructuring	=	indicator variable set to 1 if the company incurred restructuring charges, 0 otherwise
Foreign	=	indicator variable set to 1 if the company has foreign operations, 0 otherwise
Merger	=	indicator variable set to 1 if the company is involved in a merger and acquisition, 0 otherwise
Restatement	=	indicator variable set to 1 if there was a restatement issued in the current year, 0 otherwise
Going Concern	=	indicator variable set to 1 if the company received a going concern opinion, 0 otherwise
Loss	=	indicator variable set to 1 if net income is less than zero, 0 otherwise
Audit Delay	=	number of days between the client's fiscal year-end date and the audit report date
New Auditor	=	indicator variable set to 1 if the auditor is newly hired
Busy Season	=	indicator variable set to 1 if client's fiscal year-end month is December, 0 otherwise
CEO is Chairman	=	indicator variable set to 1 if CEO is also Chairman of the Board
BTM	=	book to market ratio
Market Return	=	industry-adjusted (2-SIC) annual return
Long Debt	=	long term debt divided by total assets
Cash Shortfall	=	(common and preferred dividends + cash flow from investing – cash flow from operations) divided by total assets
CEO Tenure	=	the number of years the CEO has been in office
CEO on BOD	=	indicator variable set to 1 if CEO sits on the board of directors
Board Size	=	number of directors sitting on the board of directors
Board Independence	=	the fraction of directors that are outside directors
Old Directors	=	the fraction of directors that are over 70 years old
Inside Own	=	percentage of company ownership that is held by insiders

* I multiply these amounts with (-1) so that they enter the regressions with a positive sign. Thus, a larger value for
Net Loss; INCBEDS Loss; NONRECC Loss indicates larger amounts of losses.

Table 1. Sample selection and distribution of sample

Panel A. Sample selection

Sample includes company year observations during the 2004 -2009 period	
# of observations available in the Compustat database	54,041
Less: # of observations not in Audit Analytics database	(11,670)
	42,371
Less: # of observations not in Execucomp database	(31,847)
	10,524
Less: # of observations without Big 4 auditors	(753)
# of observations available for analysis	9,771

Panel B. Industry distribution

Two-Digit SIC	Frequency	Percent
1-10	75	0.77%
11-20	727	7.44%
21-30	1,255	12.84%
31-40	2,473	25.31%
41-50	1,195	12.23%
51-60	1,448	14.82%
61-70	1,119	11.45%
71-80	1,238	12.67%
81-90	201	2.06%
91-99	40	0.41%
Total	9,771	100%

Panel C. Year distribution

Year	Frequency	Percent
2004	1,744	17.85%
2005	1,618	16.56%
2006	1,742	17.83%
2007	1,715	17.55%
2008	1,659	16.98%
2009	1,293	13.23%
Total	9,771	100%

Table 2. Summary statistics

Panel A. Descriptive statistics

Variable	N	Mean	Std. Dev.	Min	Max
Audit Fees	9,771	3,860,177	7,025,472	0.000	202,000,000
Ln Audit Fees	9,771	14.545	1.009	12.481	17.275
High Auditor Monitoring	9,551	0.494	0.500	0.000	1.000
CEO Bonus	9,771	612	1,983	0.000	76,951
CEO Bonus/ Cash Compensation	9,700	0.232	0.284	0.000	0.900
CEO Bonus/ Total Compensation	9,664	0.113	0.166	0.000	0.713
Ln CEO Bonus	9,771	2.998	3.304	0.000	8.854
Net Profit	9,768	0.056	0.054	0.000	0.265
Net Loss	9,768	0.019	0.069	0.000	0.461
INCBEDS Profit	9,768	0.061	0.054	0.000	0.263
INCBEDS Loss	9,768	0.008	0.034	0.000	0.237
NONRECC Gain	9,771	0.003	0.012	0.000	0.089
NONRECC Loss	9,771	0.018	0.050	0.000	0.343
Ln Assets	9,771	7.872	1.665	4.577	12.547
Leverage	9,747	0.571	0.239	0.089	1.315
Inherent Risk	9,607	0.260	0.194	0.006	0.822
Restructuring	9,771	0.361	0.480	0.000	1.000
Foreign	9,771	0.328	0.469	0.000	1.000
Merger	9,771	0.474	0.499	0.000	1.000
Restatement	9,771	0.078	0.268	0.000	1.000
Going Concern	9,742	0.012	0.108	0.000	1.000
Loss	9,771	0.169	0.374	0.000	1.000
Audit Delay	9,737	62.141	17.685	31.000	181.000
New Auditor	9,771	0.030	0.171	0.000	1.000
Busy Season	9,771	0.695	0.461	0.000	1.000
CEO is Chairman	9,771	0.490	0.500	0.000	1.000
BTM	9,646	0.535	0.460	-1.015	2.699
Market Return	9,610	0.074	0.400	-0.725	1.947
Long Debt	9,742	0.193	0.178	0.000	0.794
Cash Shortfall	9,728	-0.150	0.147	-0.582	0.313
CEO Tenure	9,511	7.564	6.381	1.000	31.000
CEO on BOD	9,771	0.957	0.202	0.000	1.000
Board Size	9,187	9.449	2.375	5.000	17.000
Board Independence	9,187	0.730	0.138	0.333	0.923
Old Directors	9,187	0.091	0.119	0.000	0.500
Inside Own	9,171	0.100	0.148	0.000	0.795

note: All continuous variables are winsorized at 1%. Please see Appendix A for variable definitions.

Table 2, Continued

Panel B. Mean audit fees, CEO bonus ratio, and earnings components across time

Year	Audit Fees	Ln Audit Fees	CEO Bonus	CEO Bonus/Cash Compensation	CEO Bonus/Total Compensation	Ln CEO Bonus
2004	3,437,726	14.348	1063.486	0.444	0.218	5.590
2005	3,817,731	14.544	1219.052	0.456	0.218	5.690
2006	3,831,404	14.558	482.9674	0.169	0.087	2.246
2007	3,930,900	14.596	322.7699	0.110	0.051	1.530
2008	3,998,243	14.616	299.0423	0.092	0.045	1.315
2009	4,250,904	14.632	201.5382	0.089	0.043	1.255
All Years	3,860,177	14.545	611.8847	0.232	0.113	2.998

Year	Net Profit	Net Loss	INCBEDS Profit	INCBEDS Loss	NONRECC Gain	NONRECC Loss
2004	0.056	0.014	0.060	0.007	0.003	0.013
2005	0.061	0.015	0.065	0.007	0.003	0.014
2006	0.063	0.009	0.065	0.005	0.004	0.010
2007	0.059	0.013	0.062	0.007	0.003	0.012
2008	0.050	0.043	0.060	0.013	0.002	0.037
2009	0.044	0.023	0.050	0.011	0.003	0.020
All Years	0.056	0.019	0.061	0.008	0.003	0.018

Please see Appendix A for variable definitions.

Table 3. Descriptive analysis of CEO bonus compensation conditioned on loss and profit years

	Loss Years (n=1,647)	
	n	Percent
CEO Bonus > 0	570	35%
CEO Bonus = 0	1077	65%

	Mean	Std. Dev.	Min	Max
Including zero CEO bonus				
CEO Bonus	333.851	1,197.967	0	18,500
CEO Bonus/Cash Compensation	0.148	0.243	0	0.900
CEO Bonus/Total Compensation	0.069	0.135	0	0.713
Ln CEO Bonus	2.053	2.953	0	8.854
Excluding zero CEO bonus				
CEO Bonus	964.654	1,882.006	0.350	18,500
CEO Bonus/Cash Compensation	0.425	0.227	0.001	0.900
CEO Bonus/Total Compensation	0.198	0.165	0.001	0.713
Ln CEO Bonus	5.932	1.474	0.300	8.854

	Profit Years (n=8,121)	
	n	Percent
CEO Bonus > 0	4,044	49.80%
CEO Bonus = 0	4,077	50.20%

	Mean	Std. Dev.	Min	Max
Including zero CEO bonus				
CEO Bonus	668.498	2,103.153	0	76,951
CEO Bonus/Cash Compensation	0.249	0.288	0	0.900
CEO Bonus/Total Compensation	0.122	0.171	0	0.713
Ln CEO Bonus	3.191	3.338	0	8.854
Excluding zero CEO bonus				
CEO Bonus	1,342.450	2,824.665	0.050	76,951
CEO Bonus/Cash Compensation	0.501	0.207	0.001	0.900
CEO Bonus/Total Compensation	0.245	0.169	0.001	0.713
Ln CEO Bonus	6.408	1.329	0.049	8.854

Please see Appendix A for variable definitions.

Table 4. Determinants of audit fees

Variables	
Intercept	9.729***
	(0.000)
Ln Assets	0.541***
	(0.000)
Leverage	0.223***
	(0.000)
Inherent Risk	0.319***
	(0.001)
Restructuring	0.160***
	(0.000)
Foreign	0.149***
	(0.000)
Merger	0.103***
	(0.000)
Restatement	0.126***
	(0.000)
Going Concern	0.059
	(0.195)
Loss	0.108***
	(0.000)
Audit Delay	0.007***
	(0.000)
New Auditor	-0.085**
	(0.013)
Busy Season	0.088***
	(0.000)
CEO is Chairman	0.047**
	(0.015)
Industry Fixed Effects	Yes
Time Fixed Effects	Yes
Firm Clustered Standard Errors	Yes
Number of observations	9,551
Adjusted R2	0.752

note: *** p<0.01, ** p<0.05, * p<0.10. Please see Appendix A for variable definitions.

Table 5. Portfolio analyses based on net earnings and auditor monitoring

Panel A. Net Losses, Auditor Monitoring, & Mean CEO Bonus/Cash Compensation

	(a) High Auditor Monitoring		(b) Low Auditor Monitoring	Difference (a)-(b)	
(1) Low Net Losses	0.159		0.140	0.019	
(2) Mid Net Losses	0.179		0.170	0.009	
(3) High Net Losses	0.100		0.151	-0.051	***
Difference (3) - (1)	-0.059	***	0.011		
Difference (3) - (2)	-0.079	***	-0.019		

Panel B. Net Losses, Auditor Monitoring, & Mean CEO Bonus/Total Compensation

	(a) High Auditor Monitoring		(b) Low Auditor Monitoring	Difference (a)-(b)	
(1) Low Net Losses	0.070		0.063	0.007	
(2) Mid Net Losses	0.087		0.081	0.006	
(3) High Net Losses	0.042		0.075	-0.033	***
Difference (3) - (1)	-0.028	***	0.012		
Difference (3) - (2)	-0.045	***	-0.006		

Panel C. Net Profits, Auditor Monitoring, & Mean CEO Bonus/Cash Compensation

	(a) High Auditor Monitoring		(b) Low Auditor Monitoring		Difference (a)-(b)	
(1) Low Net Profits	0.245		0.219		0.026	***
(2) Mid Net Profits	0.257		0.226		0.031	***
(3) High Net Profits	0.273		0.272		0.001	
Difference (3) - (1)	0.028	**	0.053	***		
Difference (3) - (2)	0.016		0.046	***		

Panel D. Net Profits, Auditor Monitoring, & Mean CEO Bonus/Total Compensation

	(a) High Auditor Monitoring		(b) Low Auditor Monitoring		Difference (a)-(b)	
(1) Low Net Profits	0.120		0.116		0.004	
(2) Mid Net Profits	0.123		0.109		0.014	**
(3) High Net Profits	0.131		0.130		0.001	
Difference (3) - (1)	0.011	*	0.014	**		
Difference (3) - (2)	0.008		0.021	***		

Table 6. Auditor monitoring and net earnings-based CEO bonus compensation
Panel A. CEO bonus scaled by CEO cash compensation

	CEO Bonus/Cash Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.322***	-0.605***	-0.629***
	(0.005)	(0.000)	(0.000)
Net Profit	0.814***	0.644***	0.604***
	(0.000)	(0.002)	(0.008)
Net Loss	0.068	0.163	0.141
	(0.595)	(0.194)	(0.287)
High Auditor Monitoring	0.044**	0.039**	0.039**
	(0.019)	(0.034)	(0.047)
Net Profit * High Auditor Monitoring	-0.310	-0.293	-0.243
	(0.200)	(0.223)	(0.350)
Net Loss * High Auditor Monitoring	-0.733***	-0.619***	-0.564***
	(0.000)	(0.002)	(0.006)
Economic Variables			
Ln Assets		0.033***	0.029***
		(0.000)	(0.000)
BTM		-0.030	-0.033*
		(0.103)	(0.080)
Market Return		0.076***	0.086***
		(0.000)	(0.000)
Long Debt		-0.014	-0.008
		(0.768)	(0.878)
Restructuring		-0.046***	-0.041***
		(0.000)	(0.002)
Merger		0.017	0.021*
		(0.156)	(0.085)
Cash Shortfall		-0.060	-0.057
		(0.181)	(0.231)
Managerial Influence and Governance Variables			
CEO Tenure			-0.003**
			(0.013)
CEO on BOD			0.065*
			(0.064)
CEO is Chairman			0.040***
			(0.005)
Board Size			-0.002
			(0.619)
Board Independence			-0.064
			(0.187)
Old Directors			0.067

Table 6 Panel A- Continued

			(0.265)
Inside Own			0.057
			(0.341)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,483	9,285	8,677
F	80.417	81.552	261.239
Sigma	0.392***	0.381***	0.383***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Panel B. CEO bonus scaled by CEO total compensation

	CEO Bonus/Total Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.226***	-0.209***	-0.224**
	(0.001)	(0.005)	(0.021)
Net Profit	0.412***	0.336**	0.305**
	(0.001)	(0.011)	(0.027)
Net Loss	0.060	0.085	0.090
	(0.451)	(0.293)	(0.291)
High Auditor Monitoring	0.019	0.020*	0.022*
	(0.104)	(0.078)	(0.063)
Net Profit * High Auditor Monitoring	-0.130	-0.151	-0.142
	(0.395)	(0.326)	(0.384)
Net Loss * High Auditor Monitoring	-0.466***	-0.445***	-0.418***
	(0.000)	(0.000)	(0.001)
Economic Variables			
Ln Assets		-0.000	-0.001
		(0.990)	(0.782)
BTM		-0.009	-0.011
		(0.479)	(0.407)
Market Return		0.047***	0.053***
		(0.000)	(0.000)
Long Debt		0.019	0.019
		(0.514)	(0.544)
Restructuring		-0.039***	-0.031***
		(0.000)	(0.000)
Merger		0.010	0.013*
		(0.192)	(0.071)
Cash Shortfall		0.005	0.006
		(0.849)	(0.821)
Managerial Influence and Governance Variables			
CEO Tenure			-0.001
			(0.259)
CEO on BOD			0.036
			(0.103)
CEO is Chairman			0.021**
			(0.016)
Board Size			-0.000
			(0.920)
Board Independence			-0.068**
			(0.022)
Old Directors			0.099***
			(0.007)

Table 6 Panel B-Continued

Inside Own			0.068*
			(0.068)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,449	9,269	8,648
F	49.370	44.604	128.487
Sigma	0.239***	0.236***	0.232***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 7. Auditor monitoring and above and below the line earnings-based CEO bonus compensation

Panel A. CEO bonus scaled by CEO cash compensation

	CEO Bonus/Cash Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.316***	-0.589***	-0.612***
	(0.006)	(0.000)	(0.000)
INCBEDS Profit	0.665***	0.502**	0.451*
	(0.001)	(0.023)	(0.056)
INCBEDS Loss	-0.190	0.087	0.038
	(0.481)	(0.755)	(0.899)
NONRECC Gain	1.156*	1.145*	1.453**
	(0.074)	(0.082)	(0.037)
NONRECC Loss	-0.162	-0.119	-0.081
	(0.379)	(0.501)	(0.650)
High Auditor Monitoring	0.038*	0.035*	0.036*
	(0.065)	(0.080)	(0.091)
INCBEDS Profit * High Auditor Monitoring	-0.196	-0.216	-0.154
	(0.431)	(0.374)	(0.560)
INCBEDS Loss * High Auditor Monitoring	-0.964**	-0.783*	-0.687*
	(0.020)	(0.054)	(0.059)
NONRECC Profit * High Auditor Monitoring	-0.159	-0.334	-0.848
	(0.852)	(0.696)	(0.351)
NONRECC Loss * High Auditor Monitoring	-0.252	-0.165	-0.203
	(0.337)	(0.518)	(0.441)
Economic Variables			
Ln Assets		0.032***	0.029***
		(0.000)	(0.000)
BTM		-0.035*	-0.039**
		(0.058)	(0.043)
Market Return		0.074***	0.084***
		(0.000)	(0.000)
Long Debt		-0.020	-0.013
		(0.682)	(0.791)
Restructuring		-0.047***	-0.043***
		(0.000)	(0.002)
Merger		0.015	0.020
		(0.202)	(0.110)
Cash Shortfall		-0.062	-0.060
		(0.195)	(0.240)

Table 7 Panel A - Continued

Managerial Influence and Governance Variables			
CEO Tenure			-0.003**
			(0.014)
CEO on BOD			0.066*
			(0.062)
CEO is Chairman			0.040***
			(0.005)
Board Size			-0.002
			(0.610)
Board Independence			-0.065
			(0.180)
Old Directors			0.066
			(0.272)
Inside Own			0.056
			(0.349)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,483	9,285	8,677
F	76.490	77.408	250.887
Sigma	0.392***	0.381***	0.384***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Panel B. CEO bonus scaled by CEO total compensation

	CEO Bonus/Total Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.222***	-0.199***	-0.217**
	(0.002)	(0.009)	(0.027)
INCBEDS Profit	0.311**	0.253*	0.227*
	(0.012)	(0.069)	(0.057)
INCBEDS Loss	-0.065	-0.030	-0.005
	(0.721)	(0.870)	(0.981)
NONRECC Gain	0.750*	0.718*	0.873*
	(0.073)	(0.095)	(0.053)
NONRECC Loss	-0.111	-0.056	-0.027
	(0.324)	(0.619)	(0.813)
High Auditor Monitoring	0.014	0.017	0.019
	(0.256)	(0.179)	(0.134)
INCBEDS Profit * High Auditor Monitoring	-0.042	-0.076	-0.059
	(0.792)	(0.628)	(0.724)
INCBEDS Loss * High Auditor Monitoring	-0.454**	-0.447**	-0.423*
	(0.040)	(0.042)	(0.062)
NONRECC Profit * High Auditor Monitoring	-0.349	-0.458	-0.762
	(0.507)	(0.394)	(0.176)
NONRECC Loss * High Auditor Monitoring	-0.235	-0.190	-0.202
	(0.124)	(0.218)	(0.193)
Economic Variables			
Ln Assets		-0.000	-0.001
		(0.890)	(0.726)
BTM		-0.011	-0.013
		(0.358)	(0.315)
Market Return		0.046***	0.052***
		(0.000)	(0.000)
Long Debt		0.018	0.018
		(0.550)	(0.569)
Restructuring		-0.039***	-0.031***
		(0.000)	(0.000)
Merger		0.009	0.013*
		(0.236)	(0.086)
Cash Shortfall		0.007	0.008
		(0.814)	(0.803)

Table 7 Panel B-Continued

Managerial Influence and Governance Variables			
CEO Tenure			-0.001
			(0.273)
CEO on BOD			0.035
			(0.104)
CEO is Chairman			0.020**
			(0.018)
Board Size			-0.000
			(0.899)
Board Independence			-0.068**
			(0.022)
Old Directors			0.099***
			(0.007)
Inside Own			0.067*
			(0.073)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,449	9,269	8,648
F	46.856	42.613	123.118
Sigma	0.239***	0.236***	0.232***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 8. Auditor monitoring and net earnings-based CEO bonus compensation: Examination of total fees paid to auditors

Panel A. CEO bonus scaled by CEO cash compensation

	CEO Bonus/Cash Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.322***	-0.600***	-0.626***
	(0.005)	(0.000)	(0.000)
Net Profit	0.838***	0.644***	0.589***
	(0.000)	(0.002)	(0.008)
Net Loss	0.117	0.193	0.181
	(0.372)	(0.129)	(0.173)
High Auditor Monitoring	0.048***	0.037**	0.037*
	(0.011)	(0.042)	(0.056)
Net Profit * High Auditor Monitoring	-0.364	-0.293	-0.210
	(0.131)	(0.221)	(0.414)
Net Loss * High Auditor Monitoring	-0.823***	-0.679***	-0.635***
	(0.000)	(0.001)	(0.002)
Economic Variables			
Ln Assets		0.033***	0.029***
		(0.000)	(0.000)
BTM		-0.029	-0.033*
		(0.107)	(0.086)
Market Return		0.075***	0.085***
		(0.000)	(0.000)
Long Debt		-0.015	-0.009
		(0.751)	(0.854)
Restructuring		-0.047***	-0.042***
		(0.000)	(0.002)
Merger		0.017	0.021*
		(0.150)	(0.083)
Cash Shortfall		-0.054	-0.052
		(0.225)	(0.273)
Managerial Influence and Governance Variables			
CEO Tenure			-0.003**
			(0.013)
CEO on BOD			0.067*
			(0.059)
CEO is Chairman			0.040***
			(0.005)
Board Size			-0.002
			(0.609)
Board Independence			-0.064
			(0.185)
Old Directors			0.066

Table 8 Panel A-Continued

			(0.275)
Inside Own			0.058
			(0.330)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,483	9,285	8,677
F	77.558	79.213	259.582
Sigma	0.391***	0.381***	0.383***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Panel B. CEO bonus scaled by CEO total compensation

	CEO Bonus/Total Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.226***	-0.206***	-0.222**
	(0.001)	(0.006)	(0.023)
Net Profit	0.388***	0.313**	0.271**
	(0.001)	(0.017)	(0.045)
Net Loss	0.062	0.085	0.095
	(0.442)	(0.298)	(0.264)
High Auditor Monitoring	0.019*	0.018	0.020*
	(0.095)	(0.106)	(0.092)
Net Profit * High Auditor Monitoring	-0.083	-0.104	-0.070
	(0.578)	(0.492)	(0.662)
Net Loss * High Auditor Monitoring	-0.457***	-0.436***	-0.415***
	(0.000)	(0.000)	(0.001)
Economic Variables			
Ln Assets		-0.000	-0.001
		(0.962)	(0.778)
BTM		-0.009	-0.010
		(0.479)	(0.420)
Market Return		0.046***	0.052***
		(0.000)	(0.000)
Long Debt		0.019	0.019
		(0.512)	(0.546)
Restructuring		-0.040***	-0.032***
		(0.000)	(0.000)
Merger		0.010	0.013*
		(0.189)	(0.072)
Cash Shortfall		0.008	0.008
		(0.782)	(0.767)
Managerial Influence and Governance Variables			
CEO Tenure			-0.001
			(0.265)
CEO on BOD			0.037*
			(0.096)
CEO is Chairman			0.021**
			(0.016)
Board Size			-0.000
			(0.904)
Board Independence			-0.068**
			(0.021)
Old Directors			0.098***
			(0.008)

Table 8 Panel B-Continued

Inside Own			0.068*
			(0.065)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,449	9,269	8,648
F	47.939	43.372	130.239
Sigma	0.239***	0.236***	0.232***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 9. Auditor monitoring and above and below the line earnings-based CEO bonus compensation: Examination of total fees paid to auditors

Panel A. CEO bonus scaled by CEO cash compensation

	CEO Bonus/Cash Compensation		
Variables	**(1)**	**(2)**	**(3)**
Intercept	-0.319***	-0.588***	-0.613***
	(0.005)	(0.000)	(0.000)
INCBEDS Profit	0.733***	0.552**	0.475**
	(0.000)	(0.012)	(0.040)
INCBEDS Loss	-0.049	0.228	0.139
	(0.858)	(0.422)	(0.650)
NONRECC Gain	1.029*	0.915*	1.153*
	(0.059)	(0.087)	(0.051)
NONRECC Loss	-0.136	-0.108	-0.038
	(0.472)	(0.553)	(0.837)
High Auditor Monitoring	0.047**	0.039**	0.038*
	(0.020)	(0.049)	(0.068)
INCBEDS Profit * High Auditor Monitoring	-0.330	-0.313	-0.196
	(0.179)	(0.194)	(0.450)
INCBEDS Loss * High Auditor Monitoring	-1.201***	-1.034**	-0.843**
	(0.004)	(0.012)	(0.030)
NONRECC Profit * High Auditor Monitoring	0.047	0.043	-0.368
	(0.956)	(0.960)	(0.681)
NONRECC Loss * High Auditor Monitoring	-0.303	-0.185	-0.289
	(0.249)	(0.470)	(0.270)
Economic Variables			
Ln Assets		0.032***	0.029***
		(0.000)	(0.000)
BTM		-0.035*	-0.039**
		(0.058)	(0.046)
Market Return		0.074***	0.084***
		(0.000)	(0.000)
Long Debt		-0.022	-0.016
		(0.642)	(0.755)
Restructuring		-0.048***	-0.043***
		(0.000)	(0.002)
Merger		0.016	0.020
		(0.191)	(0.107)
Cash Shortfall		-0.058	-0.056
		(0.228)	(0.272)

Table 9 Panel A-Continued

Managerial Influence and Governance Variables			
CEO Tenure			-0.003**
			(0.014)
CEO on BOD			0.067*
			(0.059)
CEO is Chairman			0.040***
			(0.005)
Board Size			-0.002
			(0.597)
Board Independence			-0.064
			(0.185)
Old Directors			0.066
			(0.274)
Inside Own			0.058
			(0.332)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,483	9,285	8,677
F	75.042	76.500	249.748
Sigma	0.391***	0.381***	0.384***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Panel B. CEO bonus scaled by CEO total compensation

Variables	CEO Bonus/Total Compensation (1)	(2)	(3)
Intercept	-0.223***	-0.198***	-0.215**
	(0.001)	(0.009)	(0.028)
INCBEDS Profit	0.309***	0.257**	0.215*
	(0.011)	(0.030)	(0.065)
INCBEDS Loss	-0.003	0.039	0.048
	(0.988)	(0.831)	(0.814)
NONRECC Gain	0.660*	0.591*	0.747*
	(0.058)	(0.089)	(0.052)
NONRECC Loss	-0.123	-0.073	-0.023
	(0.286)	(0.528)	(0.842)
High Auditor Monitoring	0.017	0.017	0.019
	(0.170)	(0.154)	(0.135)
INCBEDS Profit * High Auditor Monitoring	-0.039	-0.081	-0.026
	(0.802)	(0.600)	(0.873)
INCBEDS Loss * High Auditor Monitoring	-0.556**	-0.568**	-0.501**
	(0.034)	(0.030)	(0.039)
NONRECC Profit * High Auditor Monitoring	-0.200	-0.241	-0.552
	(0.704)	(0.655)	(0.326)
NONRECC Loss * High Auditor Monitoring	-0.208	-0.153	-0.207
	(0.178)	(0.328)	(0.188)
Economic Variables			
Ln Assets		-0.000	-0.001
		(0.877)	(0.740)
BTM		-0.011	-0.013
		(0.358)	(0.325)
Market Return		0.046***	0.052***
		(0.000)	(0.000)
Long Debt		0.017	0.017
		(0.567)	(0.586)
Restructuring		-0.040***	-0.032***
		(0.000)	(0.000)
Merger		0.009	0.013*
		(0.230)	(0.087)
Cash Shortfall		0.009	0.010
		(0.769)	(0.756)

Table 9 Panel B-Continued

Managerial Influence and Governance Variables			
CEO Tenure			-0.001
			(0.279)
CEO on BOD			0.036*
			(0.096)
CEO is Chairman			0.020**
			(0.018)
Board Size			-0.000
			(0.873)
Board Independence			-0.069**
			(0.020)
Old Directors			0.099***
			(0.007)
Inside Own			0.067*
			(0.069)
Industry Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes	Yes
Number of observations	9,449	9,269	8,648
F	45.847	41.860	124.322
Sigma	0.239***	0.236***	0.232***
	(0.000)	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 10. Auditor monitoring and earnings-based CEO bonus compensation: The influence of CEO power
Panel A. CEO bonus scaled by CEO cash compensation

Variables	(1) High CEO Power Index	(2) High CEO Power Index
Intercept	-0.855***	-0.836***
	(0.000)	(0.000)
Net Profit	0.722**	
	(0.021)	
Net Loss	0.148	
	(0.537)	
INCBEDS Profit		0.573**
		(0.039)
INCBEDS Loss		-1.017
		(0.144)
NONRECC Gain		1.237*
		(0.098)
NONRECC Loss		0.331
		(0.221)
High Auditor Monitoring	0.055**	0.056**
	(0.035)	(0.042)
Net Profit * High Auditor Monitoring	-0.367	
	(0.290)	
Net Loss * High Auditor Monitoring	-0.414	
	(0.274)	
INCBEDS Profit * High Auditor Monitoring		-0.306
		(0.387)
INCBEDS Loss * High Auditor Monitoring		0.249
		(0.795)
NONRECC Profit * High Auditor Monitoring		-1.304
		(0.309)
NONRECC Loss * High Auditor Monitoring		-0.436
		(0.307)
Economic Variables		
Ln Assets	0.026***	0.024***
	(0.001)	(0.001)
BTM	-0.021	-0.030
	(0.475)	(0.299)
Market Return	0.129***	0.128***
	(0.000)	(0.000)
Long Debt	-0.106	-0.117*
	(0.124)	(0.090)
Restructuring	-0.063***	-0.065***
	(0.001)	(0.000)
Merger	0.050***	0.046***
	(0.004)	(0.008)
Cash Shortfall	-0.139*	-0.126*

	(0.060)	(0.052)
Table 10 Panel A- Continued		
Governance Variables		
Old Directors	0.091	0.097
	(0.238)	(0.208)
Inside Own	0.063	0.057
	(0.442)	(0.487)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	3,960	3,960
Sigma	0.369***	0.368***
	(0.000)	(0.000)

Panel A. CEO bonus scaled by CEO cash compensation-Continued

Variables	(1) Low CEO Power Index	(2) Low CEO Power Index
Intercept	0.496***	0.498***
	(0.000)	(0.000)
Net Profit	0.483**	
	(0.043)	
Net Loss	0.128	
	(0.397)	
INCBEDS Profit		0.280
		(0.170)
INCBEDS Loss		0.288
		(0.401)
NONRECC Gain		1.555**
		(0.045)
NONRECC Loss		-0.296
		(0.198)
High Auditor Monitoring	0.044*	0.031
	(0.079)	(0.244)
Net Profit * High Auditor Monitoring	-0.264	
	(0.418)	
Net Loss * High Auditor Monitoring	-0.628***	
	(0.009)	
INCBEDS Profit * High Auditor Monitoring		-0.070
		(0.830)
INCBEDS Loss * High Auditor Monitoring		-0.868**
		(0.047)
NONRECC Profit * High Auditor Monitoring		-0.759
		(0.522)
NONRECC Loss * High Auditor Monitoring		-0.029
		(0.929)
Economic Variables		
Ln Assets	0.036***	0.036***
	(0.000)	(0.000)
BTM	-0.034	-0.038*
	(0.129)	(0.100)
Market Return	0.067***	0.064***
	(0.000)	(0.000)
Long Debt	0.037	0.030
	(0.578)	(0.653)
Restructuring	-0.027	-0.028
	(0.144)	(0.135)
Merger	-0.003	-0.003
	(0.849)	(0.839)
Cash Shortfall	-0.009	-0.027
	(0.882)	(0.664)

Table 10 Panel A-Continued

Governance Variables		
Old Directors	-0.006	-0.005
	(0.934)	(0.947)
Inside Own	0.049	0.051
	(0.469)	(0.450)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	4,564	4,564
Sigma	0.384***	0.384***
	(0.000)	(0.000)

Panel B. CEO bonus scaled by CEO total compensation

Variables	(1) High CEO Power Index	(2) High CEO Power Index
Intercept	-0.381***	-0.361***
	(0.000)	(0.000)
Net Profit	0.459**	
	(0.023)	
Net Loss	0.051	
	(0.719)	
INCBEDS Profit		0.423**
		(0.042)
INCBEDS Loss		-0.700**
		(0.044)
NONRECC Gain		0.373
		(0.474)
NONRECC Loss		0.181
		(0.266)
High Auditor Monitoring	0.034**	0.035**
	(0.039)	(0.044)
Net Profit * High Auditor Monitoring	-0.264	
	(0.229)	
Net Loss * High Auditor Monitoring	-0.393	
	(0.122)	
INCBEDS Profit * High Auditor Monitoring		-0.217
		(0.332)
INCBEDS Loss * High Auditor Monitoring		0.021
		(0.969)
NONRECC Profit * High Auditor Monitoring		-0.833
		(0.241)
NONRECC Loss * High Auditor Monitoring		-0.367
		(0.133)
Economic Variables		
Ln Assets	-0.005	-0.006
	(0.211)	(0.137)
BTM	0.006	0.003
	(0.732)	(0.884)
Market Return	0.068***	0.069***
	(0.000)	(0.000)
Long Debt	-0.035	-0.037
	(0.408)	(0.383)
Restructuring	-0.042***	-0.043***
	(0.000)	(0.000)
Merger	0.030***	0.028***
	(0.003)	(0.006)
Cash Shortfall	-0.041	-0.023
	(0.335)	(0.618)

Table 10 Panel B-Continued

Governance Variables		
Old Directors	0.116**	0.121***
	(0.013)	(0.010)
Inside Own	0.092*	0.087*
	(0.060)	(0.071)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	3,968	3,968
Sigma	0.220***	0.220***
	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Panel B. CEO bonus scaled by CEO total compensation-Continued

Variables	(1) Low CEO Power Index	(2) Low CEO Power Index
Intercept	0.270***	0.275***
	(0.000)	(0.000)
Net Profit	0.208	
	(0.111)	
Net Loss	0.102	
	(0.327)	
INCBEDS Profit		0.048
		(0.392)
INCBEDS Loss		0.173
		(0.473)
NONRECC Gain		1.524***
		(0.009)
NONRECC Loss		-0.152
		(0.308)
High Auditor Monitoring	0.022	0.013
	(0.143)	(0.441)
Net Profit * High Auditor Monitoring	-0.156	
	(0.438)	
Net Loss * High Auditor Monitoring	-0.426***	
	(0.004)	
INCBEDS Profit * High Auditor Monitoring		0.022
		(0.914)
INCBEDS Loss * High Auditor Monitoring		-0.463*
		(0.082)
NONRECC Profit * High Auditor Monitoring		-1.188
		(0.109)
NONRECC Loss * High Auditor Monitoring		-0.088
		(0.655)
Economic Variables		
Ln Assets	0.008*	0.008*
	(0.079)	(0.076)
BTM	-0.017	-0.019
	(0.275)	(0.213)
Market Return	0.045***	0.042***
	(0.000)	(0.000)
Long Debt	0.043	0.038
	(0.283)	(0.339)
Restructuring	-0.030***	-0.030***
	(0.007)	(0.007)
Merger	-0.004	-0.004
	(0.675)	(0.700)
Cash Shortfall	0.030	0.012
	(0.407)	(0.761)

Table 10 Panel B-Continued

Governance Variables		
Old Directors	0.057	0.059
	(0.218)	(0.207)
Inside Own	0.097**	0.099**
	(0.026)	(0.025)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	4,575	4,575
Sigma	0.235***	0.235***
	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 11. Auditor monitoring and net earnings-based CEO bonus compensation: Examination of the pre-2004 era

Variables	CEO Bonus/Cash Compensation (1)	CEO Bonus/Total Compensation (2)
Intercept	-0.143	0.085
	(0.364)	(0.463)
Net Profit	1.279***	0.596***
	(0.000)	(0.000)
Net Loss	-0.119	-0.098
	(0.254)	(0.190)
High Auditor Monitoring	0.025	0.020
	(0.223)	(0.142)
Net Profit * High Auditor Monitoring	-0.611	-0.346
	(0.174)	(0.141)
Net Loss * High Auditor Monitoring	-0.002	0.001
	(0.988)	(0.989)
Economic Variables		
Ln Assets	0.053***	0.007
	(0.000)	(0.120)
BTM	-0.102***	-0.041***
	(0.000)	(0.001)
Market Return	0.145***	0.104***
	(0.000)	(0.000)
Long Debt	-0.066	-0.023
	(0.225)	(0.515)
Restructuring	-0.038**	-0.029***
	(0.015)	(0.005)
Merger	0.019	0.008
	(0.197)	(0.394)
Cash Shortfall	0.047	0.031
	(0.456)	(0.408)
Managerial Influence and Governance Variables		
CEO Tenure	-0.001	0.001
	(0.241)	(0.218)
CEO on BOD	0.036	-0.075
	(0.554)	(0.219)
CEO is Chairman	0.006	0.001
	(0.732)	(0.961)

Table 11- Continued

Board Size	0.001	0.002
	(0.735)	(0.482)
Board Independence	0.123**	0.047
	(0.025)	(0.211)
Old Directors	0.012	0.037
	(0.857)	(0.414)
Inside Own	-0.000	0.020
	(0.999)	(0.538)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	1,976	1,982
F	78.512	89.656
Sigma	0.275***	0.184***
	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10

Table 12. Auditor monitoring and above and below the line earnings-based CEO bonus compensation: Examination of the pre-2004 era

Variables	CEO Bonus/Cash Compensation (1)	CEO Bonus/Total Compensation (2)
Intercept	-0.154	0.090
	(0.338)	(0.449)
INCBEDS Profit	1.456***	0.629***
	(0.000)	(0.000)
INCBEDS Loss	-0.155	-0.164
	(0.385)	(0.149)
NONRECC Gain	1.161	0.279
	(0.288)	(0.687)
NONRECC Loss	-0.173	-0.116
	(0.354)	(0.300)
High Auditor Monitoring	0.034	0.030*
	(0.151)	(0.052)
INCBEDS Profit * High Auditor Monitoring	-0.535	-0.384
	(0.155)	(0.136)
INCBEDS Loss * High Auditor Monitoring	0.109	0.098
	(0.658)	(0.529)
NONRECC Profit * High Auditor Monitoring	-2.207	-0.818
	(0.140)	(0.388)
NONRECC Loss * High Auditor Monitoring	-0.118	-0.108
	(0.611)	(0.427)
Economic Variables		
Ln Assets	0.053***	0.007
	(0.000)	(0.126)
BTM	-0.096***	-0.040***
	(0.000)	(0.001)
Market Return	0.147***	0.104***
	(0.000)	(0.000)
Long Debt	-0.055	-0.022
	(0.311)	(0.524)
Restructuring	-0.041***	-0.029***
	(0.009)	(0.004)
Merger	0.021	0.008
	(0.159)	(0.391)
Cash Shortfall	0.092	0.044
	(0.137)	(0.264)

Table 12-Continued

Managerial Influence and Governance Variables		
CEO Tenure	-0.002	0.001
	(0.208)	(0.233)
CEO on BOD	0.035	-0.077
	(0.578)	(0.205)
CEO is Chairman	0.004	-0.000
	(0.818)	(0.974)
Board Size	0.001	0.002
	(0.881)	(0.515)
Board Independence	0.112**	0.041
	(0.040)	(0.270)
Old Directors	0.013	0.036
	(0.853)	(0.427)
Inside Own	0.004	0.021
	(0.939)	(0.526)
Industry Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Firm Clustered Standard Errors	Yes	Yes
Number of observations	1,976	1,982
F	44.564	56.768
Sigma	0.274***	0.184***
	(0.000)	(0.000)

note: *** p<0.01, ** p<0.05, * p<0.10