7-11-2011

Three Essays on Corporate Governance and Meeting-Beating or Missing Analyst Forecasts

Maria F. Rickling
Florida International University, mrick002@fiu.edu

DOI: 10.25148/etd.FI11072803

FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

THREE ESSAYS ON CORPORATE GOVERNANCE AND MEETING-BEATING OR MISSING ANALYST FORECASTS

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF PHILOSOPHY

in

BUSINESS ADMINISTRATION

by

Maria Filofteia Rickling

2011

To: Dean Joyce J. Elam
College of Business Administration

This dissertation, written by Maria Filofteia Rickling, and entitled Three Essays on Corporate Governance and Meeting-Beating or Missing Analyst Forecasts, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

_____
Abhijit Barua

_____
Suchismita Mishra

_____
Dasaratha Rama, Co-Major Professor

_____
Kannan Raghunandan, Co-Major Professor

Date of Defense: July 11, 2011

The dissertation of Maria Filofteia Rickling is approved.

_____
Dean Joyce J. Elam
College of Business Administration

_____
Dean Lakshmi N. Reddi
University Graduate School

Florida International University, 2011

DEDICATION

I dedicate this dissertation to my mother. Her endless love, her tireless support, and her unwavering dedication as a parent are the reasons for each and every one of my past, present, and future accomplishments.

ACKNOWLEDGMENTS

I wish to thank my committee members: Dr. Kannan Raghunandan, Dr. Dasaratha Rama, Dr. Abhijit Barua, and Dr. Suchismita Mishra for their support and willingness to serve on my dissertation committee.

I would like to express my sincere gratitude to my mentor Dr. Kannan Raghunandan. Words cannot express my appreciation and thankfulness for his limitless help, constant guidance, compassionate understanding, and sincere dedication to my success throughout this entire doctoral process. It is my belief that no other dissertation chair is as devoted to their students as Dr. "Raghu". I would not have been able to accomplish this without his direction.

I would also like to express my heartfelt appreciation to Dr. Divesh Sharma. The completion of this dissertation would not have been possible without his "unofficial" guidance and steadfast support.

I would also like to thank all of the faculty and staff within the School of Accounting as well as the University Graduate School. My success, and the success of the program, would not exist without their support.

Finally, I would like to extend a warm thank you to my peer Dr. Barri A. Litt for her camaraderie throughout this doctoral journey. Our many lunch meetings, study sessions, and hours of conversation greatly contributed to the magnificence of this truly unforgettable experience.

ABSTRACT OF THE DISSERTATION

THREE ESSAYS ON CORPORATE GOVERNANCE AND

MEETING-BEATING OR MISSING ANALYST FORECASTS

by

Maria Filofteia Rickling

Florida International University, 2011

Miami, Florida

Professor Kannan Raghunandan, Major Professor

The beginning of the 21st century was plagued with unprecedented instances of corporate fraud. In an attempt to address apparent non-existent or "broken" corporate governance policies, sweeping measures of financial reporting reform ensued, having specific requirements relating to the composition of audit committees, the interaction between audit committees and external auditors, and procedures concerning auditors' assessment of client risk. The purpose of my dissertation is to advance knowledge about "good" corporate governance by examining the association between meeting-or-beating analyst forecasts and audit fees, audit committee compensation, and audit committee tenure and "busyness". Using regression analysis, I found the following: 1) the frequency of meeting-or-just beating (just missing) analyst forecasts is negatively (positively) associated with audit fees, 2) the extent by which a firm exceeds analysts' forecasts is positively (negatively) associated with audit committee compensation that is predominately equity-based (cash-based), and 3) the likelihood of repeatedly meeting-or-just beating analyst forecasts is positively associated with audit committee tenure and "busyness". These results suggest that auditors consider clients who frequently meet-or-

just beat forecasts as being less "risky", and clients that frequently just miss as being more "risky". The results also imply that cash-based director compensation is more successful in preserving the effectiveness of the audit committee's financial reporting oversight role, that equity-based compensation motivates independent audit committee directors to focus on short-term performance thereby aligning their interests with management, and that audit committee director tenure and the degree of director "busyness" can affect an audit committee member's effectiveness in providing financial reporting oversight. Collectively, my dissertation provides additional insights regarding corporate governance practices and informs policy-makers for future relevant decisions.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I: INTRODUCTION

In October 2001, Enron's announcement of a $1 billion nonrecurring charge for accounting "errors" led to the demise of both the corporation and its external auditor Arthur Anderson, one of the "Big 5" brand-name auditors during its time. Months later, Enron's bankruptcy filing, largest to date at that time, was overshadowed by WorldCom and its announcement of an even larger earnings restatement due to accounting fraud, followed by subsequent fraud investigations of numerous corporate giants such as Adelphia, HealthSouth, McKesson, Tyco, and Quest (Koh et al. 2008). The downfall of such large U.S. corporations, spurred by a lack of integrity in corporate management and non-existent or "broken" corporate governance policies, left the entire business community, specifically investors, economically impacted and skeptical of the accounting profession in its ability to lend credence to corporate financial reports.

Hence, the beginning of the 21st century has been deemed the "scandals period" by academics, regulators, business leaders, and others. The largest implication has been an overhaul of the policies and regulations concerning U.S. capital markets and corporate governance systems, the most extensive being the Sarbanes-Oxley Act of 2002 (SOX). The clear intention of SOX is to restore investors' confidence in the financial reporting system by implementing numerous corporate governance provisions, including restrictions on certain auditor-provided services, mandatory auditor-partner rotation, internal controls reporting, and the composition and function of audit committees. Such reform in the regulatory environment and the economic consequences associated with litigation play an important role in shaping auditor behavior.

However, financial misreporting in the "post-scandals" and post-regulatory reform period seems to be arguably just as prevalent. Recent examples include American International Group (A.I.G.), Diebold, General Electric (GE) and Xerox, each resulting with the firm, or executives of the firm, agreeing to pay $15 million, $25 million, $50 million, and $670 million, respectively, in penalty fines associated with fraudulently reporting financial results specifically intending to meet or exceed earnings expectations (Taub 2008; SEC 2009; Walsh and Healy 2009; Goldfarb 2010; Leone 2010).

In this doctoral dissertation, I develop arguments as to why I expect various aspects of corporate governance to be relevant in explaining the behavior of companies meeting or just beating analysts' earnings forecasts. I then empirically evaluate hypotheses concerning my assertions. Specifically, my dissertation consists of three essays in which I test to determine if associations exist between the following: audit fees and the frequency with which a firm meets or exceeds or misses analyst forecasts, type of audit committee compensation and the likelihood of meeting or just beating analyst forecasts as well as the extent to which forecasts are exceeded, and audit committee characteristics (specifically, audit committee director tenure and "busyness") and the likelihood of repeatedly meeting or just beating analyst forecasts.

In the first essay, I add to extant audit fee literature by providing evidence regarding auditors' risk assessment of clients that frequently meet or just beat, or frequently just miss, analyst forecasts. The significant economic consequences of meeting or just beating analysts' forecasts have led management to adopt earnings manipulation practices (e.g., Bartov et al. 2002; Barua et al. 2006; Bauman and Shaw 2006; Burgstahler & Eames 2006). Such practices have led to the SEC using a pattern of

meeting or beating analysts' estimates to identify possible cases of accounting irregularities (Bryan-Low 2002). Extant academic literature has found evidence that audit fees are higher for client firms that possess more inherent risk, suggesting that auditors seek to be compensated for accepting an engagement that carries a greater likelihood of auditor litigation (Bell et al. 2001; Bedard and Johnstone 2004; Abbott et al. 2006). Consistently meeting or just beating analyst forecasts may signal additional client risk to auditors leading to higher audit fees. The counterpoint to this argument is that since the market assigns a higher value to firms that meet or beat, and consistently meet or beat, earnings forecasts (Barth et al. 1999; Bartov et al. 2002; Kasznik and McNichols 2002; Chevis et al. 2007), auditors may view such client behavior as posing less risk of litigation leading to lower audit fees. Given the aforementioned countering points, I do not make a directional prediction concerning the association between audit fees and frequently meeting or just beating, or just missing, earnings forecasts.

In the second essay, I seek to empirically address a question that continues to be of significant interest amongst academics and practitioners: how to remunerate the board of directors for public firms. The agency framework suggests that to ensure directors provide effective oversight of management and protect shareholders' interests, directors need to be appropriately compensated (Elson 1995; Daily and Dalton 2002; Hillman and Dalziel 2003; Sharma and Iselin 2006; Archembeault et al. 2008). However, what the "appropriate" compensation structure should be is yet to be determined. The present compensation structure for directors comprises equity and cash, with an increasingly greater proportion of equity (Monks and Minow 2001; Yermack 2004) because the belief is that incentive-based compensation will align the directors' interests to those of

shareholders, as it would motivate directors to ensure management engages in projects that create value for the firm (NACD 2001; 2003). Conversely, equity-based pay could also align directors' interests with those of management's and cause directors to focus on the short-term financial performance goals of the firm in order to boost equity compensation payouts. Given the vital role of the audit committee in providing financial reporting oversight, contemporary literature has studied the effects that varying audit committee director compensation structures have on different proxies of financial reporting quality, in general yielding evidence indicating that equity-based pay causes a misalignment of directors' interests and that cash-based pay may preserve objectivity in performing financial reporting oversight tasks (Carcello and Neal 2003; Sharma and Iselin 2006; Archambeault et al. 2008; Cullinan et al. 2008; 2010; Persellin 2009). Hence, in this second essay, I contribute to the literature by analyzing the proclivity of firms to meet or just beat, as well as the degree to which they beat, analysts' earnings forecasts as a function of the type of audit committee director pay. I categorize audit committee compensation types as the percentage of equity compensation to total compensation, the percentage of cash compensation to total compensation, and the ratio of the natural logarithm of cash compensation to the natural logarithm of total compensation. I posit that the proportion of equity-based (cash-based) pay will be positively (negatively) associated with the likelihood that a firm will meet or just beat analyst expectations as well as positively (negatively) associated with the extent to which the actual earnings exceed forecasted earnings.

In the third essay, I examine the association between audit committee characteristics and the likelihood of firms repeatedly meeting or just beating or just

missing analysts' forecasts. Almost all prior research on audit committee composition has focused on independence and financial expertise of the audit committee directors. I extend the literature on audit committee composition by focusing on two factors that have received little attention in prior research, yet have become the focus of legislators, good governance advocates, and others: audit committee members' tenure and the number of other directorships (i.e. "busyness"). The limited literature that does exist pertaining to the association between various measures of financial reporting quality and audit committee tenure and busyness yields non-uniform results (Yang and Krishnan 2005; Sharma and Iselin 2006; Fich and Shivdasani 2007; Dhaliwal et al. 2010). Given such inconsistent evidence I do not make a directional prediction concerning the effects of audit committee tenure and busyness on the likelihood of meeting-beating analyst forecasts.

I organize the remaining sections as follows. Chapter II begins with a discussion concerning corporate governance, associated legislation and policy implementation, and the increasingly important role of the audit committee in the monitoring of financial reporting. In addition, I present an in-depth discussion on the phenomena of meeting or just beating analysts' earnings expectation including anecdotal evidence of its economic consequences. I also provide arguments as to why I employ it as a proxy for earnings management, and I summarize the related research that has been conducted on this topic within a variety of contexts.

Chapter III presents the first essay, which examines the association between audit fees and the frequency with which firms meet or just beat, or just miss, analyst forecasts. The natural logarithm of audit fees serve as the proxy for the auditor's assessment of

client-risk and, using OLS regression, I test the effect of the frequency of meeting or just beating and just missing analyst forecasts. I find that the frequency of meeting or just beating (just missing) analyst forecasts is negatively (positively) associated with audit fees.

Chapter IV contains the second essay, which studies the effect of types of audit committee compensation on the likelihood of meeting or just beating analyst forecasts, and if the firm beats the forecast the extent to which the forecast is exceeded. Using logistic regression, I find that predominantly equity-based (cash-based) compensation is positively (negatively) associated with the likelihood of meeting or just beating analyst forecasts, as well as the extent to which the forecast is exceeded.

Chapter V focuses on the third essay, which pertains to the analysis of the association between audit committee tenure and busyness and the likelihood of meeting or just beating earnings forecasts. The relevant hypotheses are tested using logistic regression and the evidence yields a positive association between audit committee directors' tenure and multiple board seats and the likelihood of meeting or just beating earnings forecasts.

Chapter VI concludes this dissertation. In this chapter, I discuss the three essays, including the contributions of this dissertation and potential limitations, and suggest avenues for future research.

CHAPTER II: CORPORATE GOVERNANCE AND MEETING-BEATING ANALYST FORECASTS IN THE POST-SOX ERA

In this chapter, I discuss prior research relating to meeting or beating analyst earnings forecasts in a variety of contexts, as well as the historical changes in applicable regulations and the increasing legislative focus on audit committees and corporate governance policies. I begin by presenting anecdotal evidence of contemporary occurrences and the related economic consequences of firms reportedly manipulating earnings specifically to meet or beat earnings expectations. I then discuss why I employ meeting or beating analyst forecasts as a proxy for earnings management and provide a timeline of regulation that has been enacted to curb such activity, and conclude by describing pertinent legislation and characteristics concerning corporate governance and the audit committee.

Corporate governance concerns the relationships between all stakeholders in an organization, including shareholders, directors, management, and auditors, and is comprised of policies, processes, and procedures that affect the way a company conducts its business. However, each stakeholder possesses a personal agenda that is often unique, with the difference usually most extreme between the principals of the organization (shareholders) and the agents (management). This difference in interests defines the basic premise of agency theory and characterizes the separation of ownership and control that exists in corporations. Thus, corporate governance,

> "… is concerned with understanding the mechanisms that have evolved to mitigate incentive problems created by the separation of the management and financing of business entities. Financial accounting provides financiers with the primary source of independently verified information about the performance of

> managers. Thus, it is clear that corporate governance and financial accounting are inexorably linked." (Sloan 2001, 335-6)

The description of the relationship between corporate governance and financial accounting as an "inexorable link" underscores the importance of *transparent* financial reporting as a component of an effective corporate governance system: one that is designed to mitigate market failures, moral hazards, asymmetric information, and opportunistic managerial behavior (Bonazzi and Islam 2007).

The numerous financial reporting scandals at the beginning of this century have led to widespread reform of corporate governance practices and regulations. However, as the 20th century was coming to a close, business leaders were already expressing concerns about aggressive earnings management. For example, throughout the 1980s and 1990s private sector institutions like the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and blue ribbon commissions were already in the midst of devising frameworks for the implementation of effective governance systems (National Commission on Fraudulent Financial Reporting [NCFFR] 1987; New York Stock Exchange / National Association of Securities, Blue Ribbon Committee [BRC] 1999). The following is a fatefully predictive quote made in 1998 by former Securities and Exchange Commission chairman Arthur Levitt: "I fear that we are witnessing an erosion in the quality of earnings, and therefore, the quality of financial reporting. Managing may be giving way to manipulation; integrity may be losing out to illusion" (Charles et al. 2010, 18). Arguably, the words of Mr. Levitt spurred an interest to improve corporate governance mechanisms.

Beginning in 1999, the New York Stock Exchange (NYSE) and the National Association of Securities Dealers Automated Quotations (NASDAQ) modified their listing conditions to include requirements pertaining to board independence and the inclusion of a financial expert on the listing firm's audit committee (Carcello et al. 2008). However, the failure of audit committees amongst the Enron-type string of scandals led the U.S. Congress to pass the Sarbanes-Oxley Act of 2002 (SOX), which charged audit committees with having the responsibility of monitoring financial reporting and also mandated numerous corporate governance provisions including audit committees be comprised entirely of independent directors as well as the disclosure of the presence of a financial expert. Thus, there is now universal agreement amongst regulators, legislators, boards of directors, auditors, and academics that the audit committee is the primary internal governance mechanism responsible for overseeing the quality of financial reports prepared by management (e.g., Securities and Exchange Commission (SEC) 1999a; 2003; Sarbanes-Oxley Act (SOX) 2002; U.S. Senate 2002a; 2002b; DeZoort et al. 2002; DeFond and Francis 2005; Beasley et al. 2009; Carcello et al. 2011; Sharma and Sharma 2011).

Further, in October 2002 the American Institute of Certified Public Accountants (AICPA) issued the Statement on Auditing Standards (SAS) No. 99: Consideration of Fraud in a Financial Statement Audit, effective for audits of financial statements for periods beginning on or after December 15, 2002 (AICPA 2007). Brought upon by the scandals, SAS No. 99 represents professional guidance in assisting auditors identify client risks that may result in a material misstatement due to fraud. It includes new procedural requirements for auditors and charges audit committees with additional

responsibilities in the audit function (Charles et al. 2010). This revised emphasis on risk-assessment and fraud detection immediately following the demise of Arthur Anderson suggests the profession's renewed commitment to improving the quality of financial statement audits.

Although these policy and legislative reforms have been enacted to deter corporate fraud through an intensified focus on systemic corporate governance changes, opportunistic earnings manipulation continue to spring forth in the "post-Sox" era, in part evidenced by recent risk-based investigations associated with meeting or beating analysts' earnings forecasts.

The significant economic gains attributed to meeting or just beating, and the extent of beating, analysts' forecasts have led management to adopt earnings manipulation practices (e.g., Bartov et al. 2002; Barua et al. 2006; Bauman and Shaw 2006; Burgstahler & Eames 2006). Such practices have led to the SEC using a pattern of meeting or beating analysts' estimates to identify possible cases of accounting irregularities (Bryan-Low 2002).

Since SOX, the frequency of meeting or just beating analyst earnings expectations appears to have declined (Bartov and Cohen 2008; Koh et al. 2008). However, the problem has not disappeared as firms continue to engage in earnings manipulation to achieve these benchmarks set by financial analysts. For instance, in August of 2009, General Electric (GE) agreed to pay a $50 million penalty to settle charges stemming from a risk-based investigation made by the SEC alleging that GE consistently met or exceeded financial analysts' consensus EPS expectations (SEC 2009). The SEC's investigations found four separate occasions where GE's accounting executives approved

improper application of accounting standards. Other recent examples include American International Group (A.I.G.), Diebold, and Xerox, resulting with the firm, or executives of the firm, agreeing to pay $15 million, $25 million, and $670 million, respectively, in fines associated with fraudulently reporting financial results specifically intending to meet or exceed earnings expectations (Taub 2008; SEC 2009; Walsh and Healy 2009; Goldfarb 2010; Leone 2010).

Prior, Related Literature on Meeting/Beating Analyst Forecasts

Analysts' forecasts are an important proxy for the market's expectations of a firm's performance, which management strives to meet and/or beat (Degeorge et al. 1999). Management has two primary incentives to meet or beat analysts' forecasts: a firm valuation premium and a reduced cost of capital.

Empirical evidence shows that investors assign a valuation premium to firms that meet or beat analysts' forecasts and penalize those that fall short. Moreover, the reward is greater as the duration, and extent to which forecasts are exceeded, increases. For example, Barth et al. (1999) employ the Miller and Modigliani (1966) price-earnings valuation model and determine that firms with patterns of increasing earnings have higher earnings multiples. They obtain a sample of 21,173 firm-year observations spanning the period of 1982-1992 and comprising of firms having at least five years of earnings history. Data are obtained from the Compustat, the Center for Research and Securities Prices (CRSP), and the Institutional Brokers Estimate System (I/B/E/S) databases. The authors also find evidence of a decrease in the earnings multiple when a firm experiences a decrease in earnings subsequent to continuous earnings increases. Their findings suggest that the changes in the earnings multiple "is not attributable to factors known

before the [earnings] pattern develops", lending further support to the notion that the market rewards firms exhibiting patterns of increasing earnings (Barth et al. 1999, 410).

Bartov et al. (2002) obtain the necessary data from the Compustat, CRSP, and I/B/E/S databases in order to test for the existence of differences in returns associated with meeting or beating analysts' earnings expectations. Studying a sample of 64, 872 firm-quarter observations during January 1983 and December 1997, they regress various measures and frequencies of earnings surprises on risk-adjusted cumulative abnormal returns over the period of two days before the date of the earliest forecast until one day after the quarter's actual results. The authors find that quarterly abnormal returns are positively associated with the earnings surprise for the quarter. These results strongly suggest that investors reward (penalize) firms having earnings that meet or beat (miss) earnings forecasts. Kasznik and McNichols (2002), employing research methodology similar to Bartov et al. (2002), find that abnormal annual returns are positively associated with firms at least meeting analysts' estimates, and that the market assigns an even higher value to firms that meet estimates consistently.

Building upon the aforementioned studies, Chevis et al. (2007) empirically address the question as to whether managers have incentive to consistently meet or beat analysts' forecasts and thus view this behavior as a "strategy" in improving market perceptions. Specifically, they examine whether the market valuation and the valuation of earnings of firms that consistently meet or exceed analyst forecasts differs as the frequency of meeting or beating increases. The authors analyze the period 1991 through 2003. Following Bartov et al. (2002), they obtain data from the I/B/E/S database to create quarterly measures of analyst forecasts in order to derive measures for meeting or

beating, or missing, forecasts. The authors use standard OLS regression, with a measure of firm market value as the dependent variable, and compare the estimates obtained across two sub-samples: the "meet" sub-sample comprised of firms meeting or beating the analyst forecast measure for exactly 8 consecutive quarters, and the "non-meet" sub-sample comprised of firms meeting or beating the forecast measure for no more than four quarters. Regression analysis yields evidence suggesting that "meet" firms are more highly valued in the market than "non-meet" and that this valuation premium is positively associated with the firm's "meet" horizon.

In summary, this line of research has found that investors assign a valuation premium to firms that meet or beat analysts' forecasts and penalize those that fall short. Moreover, the reward is greater as the duration increases and as the extent to which forecasts are exceeded increases. In addition, this premium exists even when the firm likely manages either earnings or expectations in order to meet the earnings expectations.

In addition to enjoying a premium in stock price valuation, management may be incentivized to meet or exceed analyst forecasts, and to consistently do so, in order to reap the benefit of a reduced cost of capital that is associated with a decrease in information asymmetry.[1] Brown et al. (2009) empirically test the conjecture that meeting or beating analyst forecasts results in a reduction in information asymmetry, thereby resulting in an implicit reduction in cost of capital. They base their analysis on research suggesting that uninformed investors are attracted to stocks of firms that receive greater attention (Grullon et al. 2004; Frieder and Subrahmanyam 2005; Barber and Odean

[1] Ross (1977), Myers and Majluf (1984), Diamond and Verrecchia (1991), and Lev (1992) develop theoretical arguments for the positive association between cost of capital and information asymmetry that have been empirically supported (Ruland et al. 1990; Frankel et al. 1995; Lang and Lundholm 1993; 2000; Marquardt and Wiedman 1998).

2008), and assert that earnings surprises are events that capture the attention of investors. Their analysis period is the first quarter of 1995 through the second quarter of 2004. The OLS regression is performed on a sample comprising 61,838 firm-quarters, resulting from the intersection of the Trades and Quotes (TAQ), CRSP, and First Call databases, and is modeled so that estimates are obtained on the association between changes in the probability of informed trading (or bid–ask spreads) and whether firms beat or miss the measure for analyst earnings forecasts and other control variables. In both regressions, the variable representing firms that beat (miss) analysts' forecasts is negative (positive) and highly significant. In addition, a variable representing consistent beating of forecasts is also found to be significant as opposed to only sporadically beating forecasts. In summary, Brown et al. (2009) find that beating (missing) analyst forecasts is negatively (positively) associated with information asymmetry and the decrease (increase) in information asymmetry is larger for "beat" ("miss") firms that have regularly met or beaten (missed) expectations over the prior eight quarters.

Graham et al. (2005) corroborate the economic gains associated with increased market valuation and reduced information asymmetry through a survey of CFOs. They report that more than eighty percent of CFOs agree that "hitting earnings benchmarks builds credibility with the market and helps to maintain or increase their firm's stock price" (Graham et al. 2005, 5).

Meeting/Just Beating Analyst Forecasts as a Proxy for Earnings Management

As noted by Carcello et al. (2011) and DeFond and Francis (2005), many prior studies have examined the notion of earnings management and reporting quality by focusing on a variety of dependent variables, such as fraudulent financial reporting,

restatements, qualified opinions, and accruals quality. Fraud, restatement, and modified opinions are relatively infrequent occurrences, while the accruals quality metrics are noisy and potentially performance-biased (DeFond and Francis 2005) and prone to problems with model specification (e.g., Krishnan et al. 2007; Ball 2009). In this dissertation, I analyze corporate governance aspects related to auditors and audit committees through the implementation of another metric that has been identified in research as a measure of earnings management (Burgstahler and Dichev 1997), namely meeting or beating analysts' forecasts. Importantly, the SEC's statements and actions indicate that meeting-beating analysts' forecasts is considered by the SEC to be a factor in evaluating the quality of financial reporting (SEC 1999d; 2009).[2]

It is also important to note, *ex-post*, that employing restatements particularly in essay two of this dissertation, which studies the association between the likelihood of meeting or beating analyst forecasts, and the extent of beating forecasts, and the type of audit committee compensation, poses certain limitations. It is often not clear when the accounts were actually misstated that led to a subsequent restatement (Agrawal and Chadha 2005). Researchers use financial restatements to proxy for the fact that the accounts were misstated and tend to examine data in the year of, or the year prior to, the restatement. Unless there is a fairly precise match between the year the misstatement took place and the audit committee's compensation, I cannot use restatements as a proxy for earnings management since I am unable to clearly analyze the incentives facing the audit committee members *at the time* the accounts were misstated.

[2] The SEC (1999d) noted that "among the considerations that may well render material a quantitatively small misstatement of a financial statement item" is "whether the misstatement hides a failure to meet analysts' consensus expectations."

Thus, one such proxy for financial manipulation widely recognized in the literature that may avoid the limitations of financial restatements, and have an immediate impact on the capital markets, is meeting or beating analysts' forecasts. In this dissertation, the ability of management to meet or just beat, and the extent to which they beat, analysts' forecasts serve as the proxy for management's manipulation of earnings information contained in the financial reports (see Dechow et al. (2010) for a comprehensive discussion of proxies for earnings manipulation).

In summary, given the theoretical, and empirically supported, economic consequences associated with achieving positive earnings surprises and avoiding negative ones, prior research considers meeting or beating analysts' forecasted earnings a form of earnings management (e.g., Burgstahler and Dichev 1997; Frankel et al. 2002). Therefore, in this dissertation I use meeting or beating analysts' forecasts as a proxy for financial reporting quality for several reasons. First, as presented above, it is a performance measure that management is strongly motivated to meet (Degeorge et al. 1999). Second, the occurrence of meeting or beating analysts' forecasts via improper accounting methods remains prevalent in present day markets (SEC 2009). Third, prior research (DeFond and Francis 2005; Dechow et al. 2010) argues meeting or beating analysts' forecasts (1) is a relatively less noisy proxy for earnings management/financial reporting quality, (2) it is a measure widely understood by the market, and (3) occurs more frequently than other proxies such as fraud, restatements, and going concern modifications.

CHAPTER III: AUDIT FEES AND REPEATEDLY MEETING-BEATING OR MISSING ANALYST FORECASTS

The motivation for this essay comes from the apparent proclivity of companies to meet or beat analysts' expectations, and the risk-based investigations that have been conducted on firms engaging in such behavior. One such instance pertains to General Electric (GE). In August 2009, GE agreed to pay a $50 million penalty to settle charges stemming from a risk-based investigation made by the SEC alleging that GE accounting executives approved improper application of accounting standards, with one specific occasion allowing GE to directly avoid missing analysts' expectations. The SEC (2009) specifically noted in its complaint that GE consistently met or exceeded financial analysts' consensus EPS expectations each quarter from 1995 through 2004.

The significant economic gains of meeting or just beating analysts' forecasts have led management to adopt earnings manipulation practices (e.g., Bartov et al. 2002; Barua et al. 2006; Bauman and Shaw 2006; Burgstahler & Eames 2006). The SEC has used a pattern of meeting or beating analysts' estimates to identify possible cases of accounting irregularities (Bryan-Low 2002). Thus, if regulatory agencies such as the Securities and Exchange Commission view firms that engage in such behavior as worthy of being subject to "risk-based" investigations, then it begs the question of whether auditors view clients that frequently meet or just beat (just miss) as having more (less) inherent risk and hence whether audit fees are priced accordingly in order to compensate for the increase (decrease) in likelihood of auditor litigation. However, given that empirical evidence documents a market valuation premium assigned to firms that meet, beat, and consistently meet or beat earnings forecasts (Barth et al. 1999; Bartov et al. 2002;

Kasznik and McNichols 2002; Chevis et al. 2007), a client with a higher market-assigned valuation may be viewed by auditors as posing less risk of auditor litigation. Simunic and Stein (1996) reason that as client-specific risk increases, so does the risk of auditor litigation and auditors increase audit effort to reduce litigation or increase audit fees to compensate for litigation exposure (Watkins et al. 2004). This assertion suggests that litigation risk is positively correlated with audit fees, and has been empirically supported through studies seeking to understand the relationship between client risk, audit effort, and audit fees (Simunic and Stein 1996; Bell et al. 2001; Johnstone and Bedard 2003; Bedard and Johnstone 2004). The question at hand is whether auditors view client firms that consistently meet or beat analyst forecasts as being more or less inherently risky. Given the aforementioned countering points, I do not make a directional prediction concerning the association between audit fees and the frequency of meeting or just beating, or just missing, earnings forecasts.

Related Research

I begin the discussion of related literature with a review of the audit fee research, which is an integral component in understanding the association between a client's inherent risk and the pricing of the client's audit.

Audit Fee Framework

Prior to discussing existing literature seeking to identify determinants of audit fees, it is important to first present the audit fee framework to which many extant audit fee-related papers adhere. Drawing on multiple sources, Charles et al. (2010) succinctly discuss the audit fee framework. They begin by stating that in order to make decisions such as the structure of an audit, pricing of services, and client retention, auditors must

perform an assessment of client risk (Messier et al. 2008), and that a useful tool pertaining to risk assessment is the audit risk model, as presented by the professional auditing standards of the American Institute of Certified Public Accountants (AICPA). One of the model's risk components is the client's inherent risk, which is influenced by various characteristics of the client organization, such as management's attitude toward fair and transparent reporting and corporate governance practices. The model conveys that, *ceteris paribus*, auditors can offset higher levels of inherent risk by decreasing detection risk (Charles et al. 2010). Auditors can reduce detection risk by increasing the quality and/or quantity of the audit services provided. Such an increase in audit effort results in an increase in the fees charged for the audit services. This assertion is corroborated with the seminal production function model of audit fees documented by Simunic (1980), which supports the notion that auditors will charge higher audit fees to riskier clients.

Audit Fees and Audit Quality

This stream of research is grounded in studies that analyze the existence of an audit fee premium associated with different types of auditing firms. Within the context of the audit fee framework, a positive relation is generally assumed to exist between audit quality and audit fees, with most researchers theorizing that larger audit firms charge higher fees in exchange for the provision of higher quality audit services (Davidson and Neu 1993; Watkins et al. 2004). Three relevant theories are: 1) larger audit firms seek to earn relatively larger future economic rents from clients, and therefore provide better quality of services in order to secure those rents (DeAngelo 1981b), 2) larger audit firms have a reputation to protect and are therefore more diligent and objective than smaller

audit firms (Klein and Leffler 1981; Palmrose 1988), or 3) as argued by Dopuch and Simunic (1982), "audit quality is a function of the number and extent of audit procedures performed by the auditor and…large firms visibly have more resources with which to conduct tests" (Watkins et al. 2004, 175).

One of the earliest empirical studies pertaining to testing the aforementioned theories on large audit firms and audit quality is Simunic (1980), who develops an audit fee determinant model that is used by most contemporary audit fee literature. Simunic (1980) captures audit fee data by gathering responses from 397 public companies in the United States, to a survey administered in 1977. In addition to developing a widely used least-squared regression model for estimating the coefficients on variables representing the determinants of audit fees, the paper presents results suggesting that Big 8 auditors charge lower audit fees due to being able to take advantage of economies of scale and thereby passing cost savings on to the client firms.

Subsequent studies have presented results to the contrary. Using 210 responses collected from a questionnaire administered to firms selected from two 1984 industrial firms manuals that represent the small client segment, Francis and Simon (1987) provide evidence that Big 8 audit firms charge a premium for their audit services. These results suggest a differentiation in audit quality amongst Big 8 and non-Big 8 firms.

In comparing management earnings forecasts of net income to actual audited net income for 112 firms applying for initial listing on the Toronto Stock Exchange between 1983 and 1987, Davidson and Neu (1993) find that the absolute value of the forecast error is larger for firms audited by a Big 8 audit firm. Their results, obtained using

ordinary least squares (OLS) regression with the natural logarithm of the "relative prediction error", suggest that "brand name" audit firms provide better quality auditing.

Using data collected from Australian firm proxy statements, as well as data published in an Australian academic database, for a sample of 1,484 public, Craswell et al. (1995) document the existence of two types of audit fee premiums: one associated with the brand name of the Big 8 auditor, and one associated with the Big 8 auditor's specialization within a specific industry. They find a 30% increase in premium for Big 8 auditors as compared to non-Big 8 auditors, and a 34% increase in premium for industry-specialized Big 8 auditors, as compared to non-specialized Big 8 auditors.

DeFond et al. (2000) conduct a similar study, however the analysis is performed on 348 public companies in Hong Kong and examines the audit fees charged by Big 6 versus non-Big 6 firms. They use the 1992 Pacific-Basin Capital Market Database (PACAP) and document the existence of an audit fee premium associated with both auditor brand name and auditor specialization.

In summary, the majority of empirical research seeking to test the assumption that larger, brand name audit firms provide better quality auditing services generally supports this supposition and provides evidence suggesting that larger brand name, specialized audit firms provide better quality audit services.

These earlier works used "audit*or* quality" to mean "audit quality", but with the passage of time, more contemporary works have analyzed audit quality in the literal sense using various proxies. This more literal analysis stems from theoretical arguments that audit quality, in its literal sense, pertains to resource availability (see the Dopuch and Simunic (1982) theory mentioned above). For example, using the September 2001

version of the Compact Disclosure - SEC (CD-SEC) database, Geiger and Rama (2003) identify 66 manufacturing firms possessing the required data in order to study the association between audit fees and firms receiving first-time going concern modified opinions during the 2000 fiscal year. Using logistic regression on a matched-pair design, the authors find a significant positive association between the magnitude of audit fees and the likelihood of receiving a modified going concern opinion. These results support research concerning the production function of audits (Simunic 1980); specifically it compliments extent research that finds a positive association between audit fees, audit effort, and audit quality (Palmrose 1986).

Larcker and Richardson (2004), apply latent class mixture models[3] to 3,424 firms obtained from the Standard and Poor's database, which are restricted to only non-financial firms and only firms that are audited by a Big 5 auditor, during the fiscal years 2000 and 2001. They determine that the level of audit fees is negatively associated with the dependent variable, which are various measures of accruals. These "results are most consistent with auditor behavior being constrained by the reputation effects associated with allowing clients to engage in unusual accounting choices" (Larcker and Richardson 2004, 625). However, Choi et al. (2010) present evidence that abnormal audit fees are negatively associated with audit quality as represented by the absolute value of discretionary accruals and serves as the dependent variable. They conduct their study by obtaining the necessary data from Compustat and verifying the accuracy of the data by referring to the sample firms' actual quarterly or annual report filings. They restrict their

[3] The authors claim that by classifying the sample "into homogeneous clusters of observations that appear to follow a similar regression model" (Larcker and Richardson 2004, 638) they can then identify the characteristics common to the clusters and then utilize standard statistical methods for analysis. This description forms the basis of the latent class mixture method of analysis.

sample to firms that do not operate in the financial industry or the utilities industry (i.e. the SIC code not being either 6000-6999 or 4000-4999). Their sample period runs from the year 2000, when audit fee data first became available in Compustat, and ends in the year 2003 to avoid any data complications associated with the adoption of SOX Section 404 in 2004. Their findings, obtained by OLS regression, suggest that positive abnormal audit fees may incentivize auditors to compromise audit quality.

In summary, contemporary research seeking to understand audit fees as a function of audit quality, as opposed to audit*or* quality, yield inconclusive results.

Audit Fees and Client Risk

Many studies within the last decade have analyzed audit fees as a function of various proxies for client risk. For instance, Bell et al. (2001) acquire confidential workpapers pertaining to the audits of 422 client firms conducted by an international accounting firm during 1989. Using the natural logarithm of fees billed, the natural logarithm of hours worked, or the fee per hour as the dependent variable, they document a positive association between audit fees and the auditor-assessed level of client business risk obtained via OLS regression. They note that the increase in audit fees arises solely out of additional hours worked, as there was no change in the hourly billing rate.

Bedard and Johnstone (2004) find similar results using data provided by an undisclosed participating audit firm. Specifically, the data used in their analyses

> "are derived from engagement partners' assessments of their existing clients made during the participating firm's 2000-2001 client continuance risk assessment process, during which the firm's engagement partners consider risks posed by their clients and make planning and pricing decisions." (Bedard and Johnstone 2004, 284)

The authors, using OLS regression with either the natural logarithm of planned audit personnel hours or the planned hourly billing rate as the dependent variable, find a positive association between earnings manipulation risk and both audit hours and hourly billing rates. They measure earnings manipulation risk as the number of "yes" answers to nine "yes/no" questions pertaining to what are considered high-risk scenarios in the audit industry, with one of the questions specifically addressing whether "the company has a history of exactly meeting consensus earnings estimates" (Bedard and Johnstone 2004, 285).

Analyzing 429 non-financial companies that are audited by the Big 5 firms during the 2000 fiscal year Abbott et al. (2006) find a significant positive association between the level of audit fees and the direction of discretionary accruals. In other words, income-increasing (income-decreasing) discretionary accruals are positively associated with higher (lower) audit fees, suggesting that auditors consider client risk when pricing engagements. These results are corroborated by Charles et al. (2010), who use a proprietary measure of financial reporting risk as the variable of interest and document its positive association with the natural log of audit fees. Their analyses are conducted using data from 4,320 Big 4 client firm-years and are restricted to the 2000-2003 period.

Using a key word search in the EDGAR Online database during the period of January 1, 2004 through March 31, 2005 to obtain their data (along with financial information from the Compustat database), Feldmann et al. (2009) find that audit fees are higher in 2005 for their sample of 228 firms that restated their 2003 fiscal year end financial statements as compared to the control group of non-restating firms. They determine this by OLS regression with the difference between the natural logarithm of

the sum of audit and audit related fees in 2005 and 2003 being the dependent variable. The authors suggest one explanation for the fee premium is the auditor's perception of an increase in litigation risk associated with the audit.

Venkataraman et al. (2008), using the SDC database to identify IPO firms and Compustat to retrieve the necessary control data, conduct an analysis of audit fees on 142 firms that go public between January 1, 2000 and December 21, 2002. Using OLS regression with the natural logarithm of audit fees as the dependent variable, they document that audit fees are higher for IPO engagements as compared to post-IPO engagements, suggesting that audit fees are higher when the auditor anticipates a higher risk of litigation associated with the engagement.

Finally, Munsif et al. (2011) use OLS regression to examine the audit fees of 1,610 SEC registrants, excluding financial and foreign firms, during 2004 through 2007 that have remediated previously disclosed internal control weaknesses. The authors obtain audit fee data from the Audit Analytics database and relevant financial data from the Compustat annual database. The authors document lower audit fees for firms that remediate such weaknesses opposed to firms that do not remediate. However, the initial audit fee premium associated with the adverse disclosure does not diminish until approximately three years after the remediation, suggesting that auditors are cautious regarding the reduction in the client's inherent risk in the first two years following the remediation. These results further suggest that auditors indeed factor client risk into the pricing of the audit.

Collectively, this latter stream of research provides evidence that audit fees are associated with the auditor's assessed level of client risk, suggesting that auditors indeed consider the client's inherent risk when pricing the engagement.

Development of Audit Fee Related Hypotheses

The risk of auditor litigation increases as client-specific risk increases, and litigation risk is a fundamental consideration during the fee-setting process of an audit engagement (Clarkson and Simunic 1994; Simunic and Stein 1996). The total cost of an audit can be categorized into two components: resource cost and possible litigation cost (Abbott et al. 2006; Simunic and Stein 1996). The former increases as audit effort increases, and the latter, as represented by Simunic (1980), is the product of litigation likelihood and the present value of all future possible losses associated with the audit of the present period financial statements. This suggests that audit litigation risk is, therefore, positively correlated with audit fees, and has been corroborated in several empirical studies investigating the relation between client risk factors, audit effort, and audit fees (e.g., Simunic and Stein 1996; Bell et al. 2001; Geiger and Rama 2003; Bedard and Johnstone 2004). The collective evidence from such studies implies that auditors taking on risky engagements attempt to mitigate such risk by enhancing the quality of the audit through an increase in monitoring. This increase in monitoring arises from an increase in audit effort (i.e. audit hours), thereby increasing the audit fees charged to the client.

Prior research concerning the association of audit fees and client risk have generally used various measures of the client firm's financial health as proxies for the auditors' litigation risk, but evidence presented in recent audit-planning research implies that

auditors also consider the likelihood of earnings management when performing an assessment of client risk (Abbott et al. 2006). For instance, using signed discretionary accruals as a proxy for earnings management, Abbott et al. (2006) hypothesize and find a significant positive association between audit fees and the likelihood of earnings management. Specifically, audit fees increase (decrease) in income-increasing discretionary accruals. Further, Bedard and Johnstone (2004) find a positive association between audit fees and the risk of a client engaging in earnings management as measured by the number of "yes" answers to nine "yes/no" questions pertaining to what are considered relevant, high-risk scenarios, with one of the questions specifically addressing whether "the company has a history of exactly meeting consensus earnings estimates" (Bedard and Johnstone 2004, 285).

Empirical evidence suggests that management has adopted earnings manipulation practices due to the significant economic advantages of meeting or just beating analysts' forecasts (e.g., Bartov et al. 2002; Barua et al. 2006; Bauman and Shaw 2006; Burgstahler & Eames 2006). However, the SEC uses a pattern of meeting or beating analysts' estimates to identify possible cases of accounting irregularities (Bryan-Low 2002). Therefore, auditors may view clients that consistently meet or just beat analyst forecasts by one cent or less as riskier clients, and thus charge higher audit fees in order to compensate for the additional potential litigation risk.

However, research pertaining to earnings forecasts present evidence suggesting positive outcomes associated with meeting or just beating forecasts, and the frequency with which forecasts are met or exceeded. For instance, Bartov et al. (2002) find that quarterly abnormal returns are positively associated with the earnings surprise for the

quarter, suggesting that investors reward (penalize) firms having earnings that meet or beat (miss) earnings forecasts. Kasznik and McNichols (2002) find that abnormal annual returns are positively associated with firms at least meeting analysts' estimates, and that the market assigns an even higher value to firms that meet estimates consistently. Further, the documented premium appears to be persistent for a length of time, which may suggest "...investors' perceptions that firms that consistently meet expectations are *less risky* than those that do not" (Kasznik and McNichols 2002, 730, emphasis added).

Chevis et al. (2007) empirically address the question as to whether managers have incentive to consistently meet or beat analysts' forecasts and thus view this behavior as a "strategy" in improving market perceptions. Specifically, the authors examine whether the market valuation and the valuation of earnings of firms that consistently meet or exceed analyst forecasts differs as the frequency of meeting or beating increases. Their analysis yields evidence suggesting that "meet" firms are more highly valued in the market than "non-meet" and that this valuation premium is positively associated with the firm's "meet" horizon. Given such documented positive (negative) outcomes assigned to firms that frequently meet or just beat (miss) analyst forecasts, auditors may view such clients as having less (more) inherent risk and thus may charge lower (higher) audit fees.

The above discussion leads to my first two hypotheses (both stated in the null form):

H_1: ***Audit fees are not associated with the frequency of meeting or just beating analyst earnings forecasts.***

H_2: ***Audit fees are not associated with the frequency of just missing analyst earnings forecasts.***

Audit Fee Model

I base the empirical model on prior research seeking to identify determinants of audit fees. The model is as follows:

$$LN\_AUDFEES = \beta_0 + \beta_1*LN\_TA + \beta_2*RECINV + \beta_3*SQRTSEG + \beta_4*FOROPS + \beta_5*LIQ + \beta_6*LOSS + \beta_7*ROA + \beta_8*BM + \beta_9*ICW + \beta_{10}*GC + \beta_{11}*BIG4 + \beta_{12}*AUDINIT + \beta_{13}*NUM\_MB + \beta_{14}*NUM\_MISS + \beta_{15\text{-}23} * (Industry\ Dummy\ Variables) + \varepsilon$$

where:

LN_AUDFEES	=	natural logarithm of the audit fees in the 2007 fiscal year ($ actual);
LN_TA	=	natural logarithm of TA, where TA is defined as total assets (first expressed in $ thousands);
RECINV	=	receivables plus inventory, scaled by total assets;
SQRTSEG	=	square root of the number of business segments, as reported in Compustat;
FOROPS	=	1 if the firm has foreign operations, 0 otherwise;
LIQ	=	ratio of current assets divided by current liabilities;
LOSS	=	1 if the firm reports negative income for 2007, 0 otherwise;
ROA	=	return on assts, measured as net income, divided by TA;
BM	=	book to market ratio, measured as book value per share, divided by share price at the end of the fiscal year 2007;
ICW	=	1 if the firm discloses an internal control weakness in 2007, 0 otherwise;
GC	=	1 if the firm receives a going concern opinion for the 2007 fiscal year, 0 otherwise;
BIG4	=	1 if the firms' auditor is a Big 4 auditor, 0 otherwise;

AUDINIT = 1 if 2007 is the auditor's initial year on the engagement, 0 otherwise;

NUM_MB = number of quarters, during 2005 through 2007, actual earnings reported meets or exceeds the analyst's forecast by one cent per share or less (i.e., $0.00 ≤ forecast error ≤ $0.01);

NUM_MISS = number of quarters, during 2005 through 2007, actual earnings reported is less than the analyst's forecast by no more than one cent per share (i.e., -$0.01 ≤forecast error < $0.00).

Control Variables

The control variables are obtained from prior audit fee literature. Nearly all of this extant audit fee literature, seeking to identify determinants of audit fees, follows the Simunic (1980) model, which uses various measures of client size, complexity, financial health, and risk. Examples of research published within the last decade that follow the Simunic (1980) audit fee model include DeFond et al. (2002), Frankel et al. (2002), Abbott et al. (2003; 2006), Whisenant et al. (2003), Bedard and Johnstone (2004), Chaney et al. (2004), Sankaraguruswamy and Whisenant (2005), Raghunandan and Rama (2006), Venkataraman et al. (2008), Charles et al. (2010), Choi et al. (2010), and Munsif et al. (2011).

Larger and more complex client firms should demand more resources from the auditor. Since audit fees are, at least partially determined by the amount of resources an auditor must allocate to a client (Simunic 1980), I follow all of the aforementioned studies and control for firm size and complexity using the following proxies. Firm size is measured as the natural log of assets (LN_TA). Following Abbott et al. (2003; 2006), Charles et al. (2010), Choi et al. (2010), Munsif et al. (2011), Raghunandan and Rama

(2006), and Whisenant et al. (2003), I control for firm complexity by including three measures in the model: the amount of inventory and receivables a firm has, scaled by total assets (RECINV), the square root of a firm's number of business segments (SQRTSEG), and a measure indicating whether or not the firm has any foreign operations (FOROPS). In line with prior research, I expect the signs of these coefficients to all be positive.

Firms that are considered financially viable and profitable pose less risk to an auditor, as the likelihood of audit-related litigation is less for financially healthy firms (Simunic 1980). Therefore, financially healthy firms should be charged lower audit fees. I use three proxies for financial health. Following Choi et al. (2010), Raghunandan and Rama (2006), and Whisenant et al. (2003), I employ a measure of liquidity (LIQ) in my model, calculated as current assets divided by current liabilities, and it represents the firm's ability to satisfy short-term obligations with liquid assets. Similar to Charles et al. (2010), Choi et al. (2010), and Venkataraman et al. (2008), I employ both LOSS and ROA as control variables in the model. LOSS indicates whether the firm reported negative earnings for the year of analysis and ROA captures the firm's return on assets, measured as net income divided by total assets. Prior studies also employ ROA (Abbott et al. 2006; Raghunandan and Rama 2006). I expect the coefficients on LIQ and ROA to be negative, and the coefficient on LOSS to be positive.[4]

Each of the following represents a potential increase in risk to the auditor: firm growth and a qualified audit opinion. Choi and Wong (2007) assert that the demand for

[4] I also included in the model the variable LEV to control for a firm's degree of leverage, but it was not significant in any of the test models. Therefore, for the sake of parsimony, I exclude it from my analyses. In addition, Menon and Williams (2001) fail to find a relation between leverage and audit fees, as do Abbott et al. (2006), and posit that leverage may not be an adequate proxy for auditor's litigation risk.

audit services is greater for rapidly growing firms than for non-rapidly growing firms. In addition, high-growth firms may present special risks to the auditor (Charles et al. 2010). I control for firm growth by including the book-to-market ratio (BM) in the model (an inverse measure of firm growth), calculated as book value per share divided by price per share of common stock outstanding at the end of the fiscal year of analysis. Since this proxy for growth is an inverse measure, I expect the coefficient to be negative. In addition, I use two measures for qualified audit opinions. Similar to Munsif et al. (2011) and Raghunandan and Rama (2006), I control for both an internal control weakness qualified opinion (ICW) as well as a going concern modified opinion (GC), and expect the coefficients to be positive.

In order to control for the possible existence of audit fee premiums associated with high-quality (i.e., Big 4) auditors, I include the indicator variable BIG4 in the model, and I expect the coefficient to be positive (based on the applicable empirically supported theoretical arguments pertaining to audit quality presented earlier).

Finally, I control for audit pricing that is unique to the initial year of the audit engagement. The first year of the audit often requires substantial additional effort from the auditor (Flanigan 2002). Conversely, auditors new to the client may discount the fees associated with the first year in order to secure future economic rents from the client (DeAngelo 1981a). I control for these idiosyncrasies in first-year audit pricing by including the indicator variable AUDITINIT in the model. This variable captures whether 2007 is the first year of the audit engagement. With regard to low-balling (pricing the first year of audit below cost), empirical evidence has been mixed. Those that find evidence of low-balling include Francis and Simon (1987), Simon and Francis

(1988), Ettredge and Greenberg (1990), and Sankaraguruswamy and Whisenant (2005), while those that do not find such evidence include Simunic (1980), Francis (1984), and Palmrose (1986).[5] I do not predict the sign of the coefficient on AUDITINIT. Similar to prior studies, I also control for industry membership and following Munsif et al. (2011). I use the ten industry groups as defined by Dr. French.[6]

Test Variables

Analysts make their earnings forecasts throughout the year, making revisions as they receive new earnings-relevant information concerning their target firms. Consequently, forecasts issued closer to the earnings announcement date are based on a more rich set of information and thus tend to be more accurate than the preceding forecasts, *ceteris paribus* (Sinha et al. 1997). This positive association between most recent forecasts and forecast accuracy has been well documented in prior research (Crichfield et al. 1978; O'Brien 1988; Brown 1991; Sinha et al. 1997). Hence, for the purpose of conservative analysis, I use the most recent forecast issued prior to the earnings announcement date as the analyst forecast measure, and calculate the forecast error for the sample of firms as actual earnings per share less forecasted earnings per share. NUM_MB (NUM_MISS) represents the number of quarters a firm's actual earnings exactly meets-or-just beats (or just misses), by one cent or less, the analyst forecast for that quarter during the twelve quarters beginning January 2005 and ending December 2007.

---

[5] Huang et al. (2009) also study fee discounts in the initial year of audit and document that discounts were around 24% in 2001 and only 16% during 2005-2006.

[6] The classifications are available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html .

Sample and Data for Audit Fee Analysis

I begin by obtaining the universe of firms in the I/B/E/S database, having a fiscal year end of December 31, and having analyst forecast data for the quarters beginning January 1, 2005 and ending December 31, 2007. I remove observations with irregular data (e.g., having more than 12 quarterly forecasts within a 12 quarter period).

I obtain 2007 audit fee data from the Audit Analytics database and relevant financial data from the Compustat annual database. Consistent with prior research related to audit fees, I discard foreign firms as well as firms that operate in the financial sector (SIC codes 60 through 67). I also remove one firm deemed an outlier.[7] This process yields 1,588 firms in the final sample.

Table 1 presents the industry distribution of the sample firms. The majority of the firms operate within the manufacturing industry (49.874%), followed by the services industry (19.081%), and the transportation industry (14.798%).

Table 2 displays descriptive data about the sample. The mean (median) total assets for the companies in the sample are $4,398 million ($655 million). The mean (median) audit fees paid by the companies in my sample are $2,378,000 ($1,184,000). On average, more than half of the sample firms have operations in countries outside of the United States (57%). The mean (median) measure of liquidity, ratio of current assets to current liabilities, is 2.926 (1.927). On average, 27% of the sample firms reported negative earnings for 2007 and experienced a return on assets of -1.6%. The mean (median) book to market ratio for the sample firms is 44.8% (38.8%), indicating that, on average, the market value of the sample firms is 2.25 times greater than the book value. With regard

[7] This firm had a book-to-market ratio (BM) 17 times larger than the sample's mean BM value.

to qualified audit opinions, the mean (median) percentage of sample firms disclosing an internal control weakness is 8% (0%), and the mean (median) of firms receiving a going concern qualified opinion is 2% (0%). On average, Big 4 firms audit 82% of the sampled companies, and only 5% have a new auditor during the year of analysis.

All of the aforementioned descriptive statistics, with the exception of the mean and median values of the natural logarithm of total assets, are in line with the descriptive statistics presented for their fourth year of analysis in Munsif et al. (2011).[8] The mean (median) number of quarters that a sample firm exactly met or exceeded the analyst's forecast during the twelve quarters between January 2005 and December 2007 is 2.15 (2), while the mean (median) number of quarters in which earnings fell short of the forecast is .64 (0).

Analysis of Pearson correlations involving the explanatory variables is presented in Table 3. Similar to Charles et al. (2010), firm size (LN_TA) is the most strongly correlated variable with audit fees. In addition, in line with the correlations presented by Choi et al. (2010), LN_TA has the highest correlation coefficients and is significantly correlated with LIQ, LOSS, ROA, and BIG4, with ρ = -0.344, -0.385, 0.339, and 0.429, respectively. Only six of the correlations exceed .3 (four of which are the aforementioned correlations pertaining to firm size), suggesting multicollinearity is not a problem. This is later confirmed by a review of the variance inflation factor (VIF) scores of all of the regressions, none of which are high enough to create a cause for concern of multicollinearity (max VIF score is 2.761).

[8] Munsif et al. (2011) study the relationship between audit fees and firms that have remediated internal control weaknesses. Their fourth year of data is 2007, the same year of analysis as studied in this essay.

Regression Results

Table 4 presents the regression results. The overall regression is significant ($F = 234.243$, $p < 0.001$) with an adjusted R^2 of 77.2%. The high R^2 of the regression suggests a well-specified model, and is in line with the reported R^2 of regression models utilized in extant audit fee studies, as stated by Abbott et al. (2006). With regard to the control variables for which I made directional predictions, they are all significant and all of the signs of the coefficients are in accordance with *ex ante* directional expectations, with the exception of the GC variable. However, similar to prior research (Abbott et al. 2006), GC is not significant in the model. An explanation for this insignificance may be the enactment of the Private Securities Litigation Reform Act of 1995 (PSLRA), which enforces proportionate liability rules in securities litigation whereby "the damages paid by the defendant are limited to their 'fair share' of wrongdoing" (Watkins et al. 2004, 166). This explanation is also presented in Carcello and Palmrose (1994) and referenced in Abbott et al. (2006). With regard to AUDINIT, no directional prediction was made and the variable is not significant in the model.

Interesting results are obtained with regard to the test variables. Both NUM_MB and NUM_MISS are significant (at $p < 0.05$ and $p < 0.10$, respectively). Specifically, there is a significant negative association between audit fees and the number of quarters a firm meets or just beats analyst forecasts by one cent (supporting the H_1 hypothesis), while there is a marginally significant positive association between audit fees and the number of quarters a firm just misses such forecasts by no more than one cent (marginally supporting the H_2 hypothesis). Stated differently, audit fees decrease (increase) when the frequency of meeting or just beating forecasts increases (decreases).

These results support my hypotheses that audit fees are associated with the frequency of meeting or just beating or just missing analyst earnings forecasts. Specifically, this evidence documents firms that often meet or just beat analyst forecasts enjoy lower audit fees while firms that often just miss are penalized with higher audit fees, suggesting that auditors view firms that often meet or just beat analyst forecasts as posing *less* risk of auditor litigation than firms that often just miss such forecasts.

Sensitivity Analyses

I conduct several sensitivity tests. Abbott et al. (2006) report that prior research indicates that audit fees do not increase linearly. Therefore, as in Abbott et al. (2006), I perform the following size-related test. I partition the sample into two groups based on total assets (below, and equal to or above, the median value of the natural logarithm of total assets, deemed "smaller" and "larger" firms, respectively) and perform separate regressions on the two samples. Table 5 presents the regression results for the larger firm sub-sample. Although the NUM_MISS variable is not significant, the association between audit fees and NUM_MB remains negative and is significant, albeit the significance is marginal ($p < 0.10$). Conversely, Table 6 illustrates that, when analyzing the smaller firms, the NUM_MB variable loses its significance, but the coefficient for the NUM_MISS variable is positive and significant ($p < 0.05$). Collectively, these results suggest that the main results are driven by firm size. Larger (smaller) firms, that frequently meet or just beat (just miss) analyst expectations, are viewed by the auditor as posing less (more) risk of auditor litigation as evidenced by lower (higher) audit fees.

As an additional sensitivity analysis, I delete the 278 sample firms that are audited by non-Big 4 auditors, and thus restrict the sample to clients of Big 4 firms. Presented in

Table 7, the results, which are qualitatively similar to those presented in Table 5, show that Big 4 auditors charge less to firms that more frequently meet or just beat analyst earnings expectations.

Conclusion

In this essay, I employ regression analysis on 1,588 non-financial, domestic firms having a fiscal year end of December 31, 2007, and I find that the frequency of meeting or just beating (just missing) analyst forecasts is negatively (positively) associated with audit fees. These results suggest auditors view firms that frequently meet or just beat (just miss) analyst forecasts as being inherently less (more) risky.

In this study, I use only one measure of forecast error. Combining conservatism and theories concerning forecast recency (Sinha et al. 1997), I use the single most recent estimate as the analyst forecast measure from which I calculate the forecast error. Therefore, one avenue for future research is to determine whether these results hold under different measures of the forecast error.

Given the results obtained herein, a second suggestion for future research is to further investigate the association between audit fees and firm size. For example, although the results found in this essay suggest that auditors view smaller firms as possessing more inherent risk, the association may be driven my omitted variables, such as auditor tenure, audit committee expertise, and board diligence. The evidence obtained in this suggested study would possibly provide insights to management pertaining to the cost-benefit analysis between recruiting and hiring directors with certain expertise and active board members and reduced audit fees.

CHAPTER IV: AUDIT COMMITTEE COMPENSATION AND MEETING-BEATING ANALYST FORECASTS

Approximately two decades ago, firms began restructuring director compensation plans to include incentive-based pay, with some firms requiring their directors to take significant equity positions within the firm. The National Association of Corporate Directors (NACD) encourages greater equity (of at least 50%) in a director's compensation structure (NACD 2001) for two primary reasons. The NACD argues that greater equity compensation will better align directors' interests with those of shareholders by directing focus on long-term rather than short-term performance goals (Daily and Dalton 2002; Boumosleh 2009). However, the ultimate intent of greater equity compensation is to motivate directors to perform their governance responsibilities more effectively so that agency conflicts between management and shareholders are mitigated.

Yet equity compensation in director pay can be perceived as a double-edged sword. This is particularly an issue of concern for directors on the audit committee. Compensating the independent directors on the audit committee with greater equity may motivate them to behave like managers seeking high returns in the short-term. Some compensation experts argue it could motivate these directors to focus on short-term performance to the detriment of the quality of the financial reporting process, while others believe it will better motivate independent directors to effectively monitor management across a range of activities including firm performance and the quality of financial reporting (Barrier 2002).

Although compensation experts agree there is skepticism regarding the potential implications of equity-based compensation on independent directors' incentives to effectively perform their corporate governance responsibilities, the use of equity-based compensation for independent directors has progressively increased in popularity (Barrier 2002; Fich and Shivdasani 2005; Archambeault et al. 2008; Boumosleh 2009). Such popularity, however, has not clearly manifested in better or improved corporate governance in the context of the audit committee's oversight of the quality of financial reporting. As equity-based compensation to independent directors has increased in popularity over the last two decades, so too has the magnitude and frequency of financial misreporting (Archambeault et al. 2008). A clear example is the Securities and Exchange Commission's (SEC) investigation of General Electric (GE), which revealed that GE's executives approved improper accounting procedures in order to meet earnings expectations (SEC 2009). GE agreed to pay a $50 million penalty to settle the charges. While such anecdotes suggest equity compensation may have unintended consequences, research evidence on the implications of equity compensation for independent directors on the audit committee is mixed, thus leading to an impasse on the consensus regarding the implications of equity-based compensation on the quality of financial reporting (e.g., Sharma and Iselin 2006; Archambeault et al. 2008; Cullinan et al. 2008; Boumosleh 2009).

To advance knowledge about why certain audit committees are more effective than others, several researchers call for examining the incentives facing the directors on the audit committee. DeZoort et al. (2002), Sharma and Iselin (2006), Archambeault et al. (2008), Carcello et al. (2011) and Sharma and Sharma (2011) recommend future research

to examine the role of the compensation paid to independent audit committee members and how it is related to their oversight of the quality of financial reports. Responding to this call is imperative because the contemporary literature offers relatively minimal insight on how incentives affect the audit committee's effectiveness in monitoring the quality of financial reporting.

Equity versus cash compensation paid to directors on the audit committee is only now receiving more academic attention although the business press has been debating its merits for some time. For example, Barrier (2002) documents interviews with executives, audit committee members, compensation consultants, and academics, and finds there is no consensus regarding what is the best form of compensation for the audit committee. The issue at hand is to design a compensation structure that motivates directors on the audit committee to provide independent and effective oversight of management-prepared financial reports while ensuring that the compensation is commensurate with their responsibilities and does not "bind" them to management (Sharma and Sharma 2011). This is an important and delicate consideration because the source of the compensation is under the control of management yet the principal of the independent directors is the shareholders. This principal-agent relationship has given way to the proposition that to act in the best interests of shareholders, the independent directors on the audit committee should receive incentives that promote shareholders' interests. One such proposition relevant to this study is that directors should receive greater equity-based compensation (NACD 2001). Whether this is appropriate is ultimately an empirical issue that, based on research to date, remains unclear.

In this essay, I aim to contribute to the limited literature on audit committee compensation and financial reporting quality by examining the association between equity and cash compensation in audit committee director pay, and the likelihood of and magnitude with which actual earnings exceed analyst forecasts. By so doing, I also inform policy-makers such as the NACD and industry compensation experts.

Prior Literature

The relatively few archival studies that examine the association between compensation paid to audit committees and financial reporting quality provides mixed results.[9] Sharma and Iselin (2006) identify 75 firms having the necessary data for analysis contained in proxy statements and Compustat and that announced a restatement between January 1, 2001 and December 31, 2002. The announcements were reported by the General Accounting Office (GAO) and relate to fiscal years 1999 through 2001. After obtaining a control group matched on year, four-digit SIC code, and size (total assets), the authors implement a "1-1 matched-pairs logistic regression" as outlined by Hosmer and Lemeshow (2000)[10] and find that providing stock options (measured dichotomously) to independent directors on the audit committee does not affect financial restatements but cash compensation (measured as the natural logarithm of the average cash compensation) does. They reason that cash compensation is not contingent on firm performance and thus may be a better form of remuneration for the audit committee.

[9] In an experimental setting, Magilke et al. (2009) observe that students acting as audit committee members prefer more aggressive reporting if they are compensated with short-term stock options but are most objective when they receive no stock-based compensation.

[10] This form of regression analysis is applicable to matched-pairs logistic regression as opposed to non-matched pairs logistic regression, and is recommended by Hosmer and Lemeshow (2000) in order to avoid biased estimates of the logit parameters that can occur when a non-matched pairs logistic regression is utilized in a 1-1 matched-sample design (Sharma and Iselin 2006).

Archambeault et al. (2008) use the 10-k wizard database to identify a final sample of 153 firms having restated financial statements from 1999-2002. They obtain a control sample by matching on year, industry as determined by SIC code, size as determined by total assets, and stock exchange. Using logistic regression with the indicator variable RSTMT as the dependent variable, they find that a greater value of both short-term and long-term stock options in a director's compensation structure is associated with a greater incidence of financial restatements. They conclude that stock options incentivize directors to focus on firm performance, which may be achieved, as their results show, through manipulation of the accounts. This evidence suggests that although stock options may lead to positive performance outcomes that promote shareholder interests initially, the performance success is achieved through devious means that eventually impose costs on the firm that shareholders bear.

Using 4,489 firm-year observations over the period 1994 through 1998, Boumosleh (2009) employs OLS regression to analyze the association between the dependent variable of total accruals and the variable of interest "Director PSO" where PSO stands for the proportion of stock options to total compensation. The author finds that greater stock option compensation in a director's compensation structure is related to lower financial reporting quality proxied by total accruals. His results suggest that greater cash compensation is a more effective form of compensation. However, Boumosleh (2009) examines the compensation of *all* directors on the board.[11]

[11] The average director compensation is about $94,000 and the maximum is greater than $34 million for the period (1994-1998). See Yermack (2004) for details of director pay over time.

Cullinan et al. (2010) study 486 U.S. firms of which 243 have an adverse internal control report in 2004 to 2005. Observations having internal control deficiencies were obtained from the Audit Analytics database and control observations were matched according to SIC code and total assets. The existence of an audit committee stock option plan was determined by reading through proxy statements. Using logistic regression, they report a positive association between the presence of a stock option compensation plan and the likelihood of an internal control deficiency suggesting that implementing a stock option plan for directors on the audit committee is detrimental to the audit committee's effectiveness in overseeing the quality of financial reporting.

In summary, it is clear that the evidence associated with specific implications of equity in the compensation structure of audit committees on financial reporting quality is mixed. One possible explanation is the use of different measures of compensation; Sharma and Iselin (2006) and Cullinan et al. (2010) use dichotomous measures because disclosure on director compensation is limited at the time of analysis. Archambeault et al. (2008) and Boumosleh (2009) estimate values of stock options making various assumptions. However, since December 15, 2006 the SEC requires proxy statements to disclose more details of director compensation including the quantity and value of any stock options granted.[12] Consequently, databases such as Corporate Library now disclose such data, which I exploit in this study.

[12] SEC final rule issued September 8, 2006. Release nos. 33-8732A, 34-54302A, and IC-27444A. File No. S7-03-06, available at: http://www.sec.gov/rules/final/2006/33-8732afr.pdf.

Development of Compensation Related Hypotheses

The agency framework suggests that to ensure directors provide effective oversight of management and protect shareholders' interests, directors need to be appropriately compensated (Elson 1995; Daily and Dalton 2002; Hillman and Dalziel 2003; Sharma and Iselin 2006; Archambeault et al. 2008). If directors' compensation is structured so as to incentivize them to act like shareholders, then it is expected that they, as agents of the shareholders, will protect the interests of shareholders by performing effective oversight of management. Since the financial reports are prepared by management, and independent directors on the audit committee are responsible for overseeing that the reports are not subject to manipulation by management, it follows that appropriately compensated audit committee directors will discharge their financial reporting oversight responsibilities objectively.

The compensation structure of directors comprises equity and cash, with a greater proportion of equity-based compensation (Monks and Minow 2001; Yermack 2004). The equity incentive component is largely in the form of stock options, because the belief is that granting stock options will align the directors' interests to those of shareholders, as it will motivate directors to ensure management engages in projects that create value for the firm (NACD 2001; 2003). This belief is empirically supported in research providing evidence that stock option compensation paid to directors is positively related to firm value (Fich and Shivdasani 2005).

However, apart from creating firm value, shareholders' interests also lie in management preparing reports that are not subject to earnings manipulation. In this context, stock options as a form of compensation to independent directors, especially

those on the audit committee, may not be appropriate. This is because stock option compensation may induce directors to engage in more risk, at a level higher than shareholders' preference, as the increase in share price from manipulated unexpected earnings, unknown to the market at that time, would yield benefits to the directors as they cash in their options (Wiseman and Gomez-Mejia 1998; Sanders and Hambrick 2007).

The SEC investigations of stock option backdating scandals at UnitedHealth, Cablevision Systems, Comverse Technology, Silicon Solutions, Broadcom and others suggests that independent directors failed in their duty to prevent the backdating scandals arguably because they too sought to gain from such practices. This assertion has also been expressed on Wall Street. For example, Kenneth A. Bertsch, director of corporate governance for TIAA-CREF, says: "Indeed, directors should not get stock options, which create an incentive to juice the stock price in the short run as they prepare to cash in options" (McNamee et al. 2002).

These anecdotes suggest that stock option-based incentive pay to directors has significant implications for a director's objectivity. The CEO entrenchment and compensation literature supports this idea because highly paid independent directors, primarily in the form of stock options, are loyal to the CEO and such a culture in the boardroom does not permit constructive criticism of management policies (Brick et al. 2006). Extending this proposition to the audit committee will imply that audit committee members receiving greater proportion of their compensation in stock options may not disagree with management's assertions regarding the financial statements. Audit committee members that are compensated with stock options will stand to gain from cashing-in their options if the firm meets or just beats or exceedingly beats analysts'

forecasted earnings. Such directors may be inclined to compromise their objectivity by supporting financial reporting decisions made by management. Directors remunerated more in cash, which usually is a fixed amount and is not contingent on firm performance, do not stand to gain from a share price increase if a firm meets or just beats or exceedingly beats analysts forecasts.

The preceding discussion leads me to expect that greater equity compensation in the audit committee directors' total compensation structure would be positively associated with the likelihood of meeting or beating analysts' forecasts. Alternatively, I expect that greater cash compensation in the audit committee directors' total compensation structure will be negatively associated with the likelihood of meeting or beating analysts' forecasts. Thus, I present three pairs of hypotheses that examine the association between audit committee compensation structure and both meet or just beat and the extent to which actual earnings exceed analysts' forecasts.

H_{3a}: The proportion of audit committee total compensation that is equity-based is positively associated with the likelihood of meeting or just beating analysts' forecasted earnings.

H_{3b}: The proportion of audit committee total compensation that is equity-based is positively associated with the likelihood of actual earnings exceeding analysts' forecasted earnings.

H_{4a}: The proportion of audit committee total compensation that is cash-based is negatively associated with the likelihood of meeting or just beating analysts' forecasted earnings.

H_{4b}: The proportion of audit committee total compensation that is cash-based is negatively associated with the likelihood of actual earnings exceeding analysts' forecasted earnings.

H_{5a}: The ratio of cash-based to equity-based audit committee compensation is negatively associated with the likelihood of meeting or just beating analysts' forecasted earnings.

H_{5b}: The ratio of cash-based to equity-based audit committee compensation is negatively associated with the likelihood of actual earnings exceeding analysts' forecasted earnings.

Compensation Model

I base the empirical model on prior research that examines the effects of audit committee compensation on the likelihood of a financial restatement (Sharma & Iselin 2006; Archambeault et al. 2008) and internal control weakness (Cullinan et al. 2010), as well as on literature addressing the likelihood of firms engaging in the meet or just beat strategy of earnings management (Frankel et al. 2002; Cheng and Warfield 2005; Chevis et al. 2007; Davis et al. 2009). Accordingly, I employ logistic regression to model the probability of a firm meeting or just beating or exceedingly beating analysts' earnings forecasts as a function of the structure of compensation paid to the members of the firm's audit committee while controlling for firm-specific and other governance characteristics. The model is specified as follows:

$$\begin{aligned} \textit{Meet-Beat} = {} & \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \\ & \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \\ & \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \\ & \beta_9 * ACIND + \beta_{10} * ACEXPERT \\ & + \beta_{11} * (\text{audit committee compensation metric:} \\ & \qquad AC\_EQUITY \text{ or } AC\_CASH \text{ or } CASHTOEQ) \\ & + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon \end{aligned}$$

where:

LN_TA	=	natural logarithm of total assets;
LEV	=	total liabilities divided by total assets;
ROA	=	net income divided by total assets;
MKTBOOK	=	market to book ratio, calculated as stock price at fiscal year end divided by book value per share;

LITRISK	=	1 if firm's SIC code is 2833 – 2836, 3570 – 3577, 3600 – 3674, 5200 – 5961, or 7370 – 7370, 0 otherwise;
BIG4	=	1 if firm is audited by a Big4 accounting firm in sample year, 0 otherwise;
INSIDEOWN	=	percentage of firm equity owned by insiders during the sample year;
CEO_EQ	=	percentage of equity-based compensation in the CEO's total compensation structure;
ACIND	=	1 if the firm's audit committee is comprised entirely of independent directors, 0 otherwise;
ACEXPERT	=	1 if the firm's audit committee has appointed an expert, 0 otherwise;
AC_EQUITY	=	audit committee's average value of equity compensation comprised of stock and stock options to average total compensation as reported by Corporate Library;
AC_CASH	=	audit committee's average cash compensation to average total compensation as reported by Corporate Library;
CASHTOEQ	=	audit committee's natural logarithm of average cash compensation to the natural logarithm of the average equity compensation as reported by Corporate Library;
INDUSTRY	=	Fama-French 10 group industry indicator variables.

Dependent Variables

Analysts make their earnings forecasts throughout the year, making revisions as they receive new earnings-relevant information concerning their target firms. Consequently, forecasts issued closer to the earnings announcement date are based on a more rich information set and thus tend to be more accurate than the preceding forecasts, *ceteris paribus* (Sinha et al. 1997). This positive association between forecast recency and forecast accuracy has been well documented in prior research (Crichfield et al. 1978;

O'Brien 1988; Brown 1991; Sinha et al. 1997). Hence, I use the most recent forecast issued prior to the earnings announcement date as the analyst forecast measure, and calculate the forecast error for the sample of firms as actual earnings per share less forecasted earnings per share. I employ four meet-beat metrics as the dependent variable:

MB	=	1 if actual earnings reported meets or exceeds the analyst's forecast by one cent per share or less (i.e., \$0.00 ≤ forecast error ≤ \$0.01), 0 otherwise;
BIGBEAT	=	1 if actual earnings reported exceeds the analyst's forecast by more than one cent per share (i.e., forecast error > \$0.01), 0 otherwise;
BIGBEAT_04	=	1 if actual earnings reported exceeds the analyst's forecast by 4 cents or more (i.e., forecast error ≥ \$0.04), 0 otherwise;
BIGBEAT_05	=	1 if actual earnings reported exceeds the analyst's forecast by 5 cents or more (i.e., forecast error ≥ \$0.05), 0 otherwise.

Prior research considers meeting or beating analysts' forecasted earnings by one penny a form of earnings management (e.g., Frankel et al. 2002). The first meet or just beat metric follows this reasoning (MB). The remaining proxies are notated BIGBEAT, BIGBEAT_04, and BIGBEAT_05 because firms beating analysts' forecasted earnings by more than one penny are considered to have increasingly surprised the market and potentially exceeded the forecasted earnings by engaging in greater levels of earnings management (Frankel et al. 2002; Cheng and Warfield 2005; Chevis et al. 2007; Davis et al. 2009). Cheng and Warfield (2005) use earnings surprises of \$0.04 or more and \$0.05 or more as measures for beating analysts' forecasts by a "large" margin. I adopt a similar practice and use both \$0.04 (BIGBEAT_04) and \$0.05 (BIGBEAT_05) as the

determining measures of exceeding forecasts by a "large" margin.[13]

Control Variables

The first control variable is firm size. Prior research (e.g., Cheng and Warfield 2005; Sharma and Iselin 2006; Chevis et al. 2007; Archambeault et al. 2008; Davis et al. 2009) controls for size because larger firms experience greater analyst and market scrutiny and thus are less likely to manipulate earnings. However, larger firms may face more pressure to meet earnings expectations so the incentive to manipulate earnings could be relatively greater than small firms. Consistent with prior research, I proxy firm size using the natural logarithm of total assets (LN_TA) and do not predict the directional association between firm size and the likelihood of meeting or just beating or exceedingly beating earnings expectations.

I include leverage (LEV) as a control variable in the model as prior research shows a relation between leverage and the likelihood of meeting or beating earnings expectations. Chevis et al. (2007) and Davis et al. (2009) report a positive association between leverage and the likelihood to meet or beat analyst forecasts. Prior research also documents an association between leverage and discretionary accruals as a proxy for earnings management (DeFond and Jiambalvo 1994; DeAngelo et al. 1994; Cheng and Warfield 2005; Boumosleh 2009). Specifically, Boumosleh (2009) finds that leverage is significant and positively associated with total accruals, however Cheng and Warfield (2005) find leverage to be negatively associated with abnormal accruals. These mixed

[13] I further justify the use of $0.04 and $0.05 as measures of "big beat" as follows. I use 4 cents because the percentage of sample observations in Cheng and Warfield (2005) [this essay] that exceeded earnings forecasts by 4 cents is 4.1 [4.3] percent. I use 5 cents because 4.3 percent of the observations in my sample exceeded earnings forecasts by 5 cents, resulting in the same sample size as the 4 cents sample. Cheng and Warfield (2005) also use 3 cents and 6 cents, and I do the same in the sensitivity analyses section.

results suggest that highly leveraged firms are either under pressure to meet or exceed performance benchmarks in order to attract future investors, or they are subject to greater scrutiny from debt-holders thus curbing management's temptations to engage in earnings management. Given these alternative explanations, I do not predict a directional association between LEV and the dependent variables.

I control for firm performance because firms with higher performance may face less incentives to manipulate earnings or, because they are high performers, they may feel market pressure to maintain or exceed performance expectations (e.g., Cheng and Warfield 2005; Chevis et al. 2007; Davis et al. 2009). Accordingly, I do not predict a directional association for firm performance measured as return on assets (ROA).

I include a variable to capture the growth of the firm as represented by the firm's market-to-book ratio (MKTBOOK). In line with prior studies (Frankel et al. 2002; Cheng and Warfield 2005; Boumosleh 2009), I predict the coefficient on this variable to be positive. I also include an indicator variable to capture whether the firm operates within a litigious industry (LITRISK), as earlier research has documented that firms in litigious industries are more likely to meet or just beat analysts' forecasts (Cheng and Warfield 2005) and that firms in high risk industries are more inclined to manage earnings (Beasley et al. 2000; Frankel et al. 2002). Based on these documented associations, I predict the coefficient of LITRISK to be positive.

Following prior studies, I include an indicator variable to control for auditor type (BIG4). Sharma and Iselin (2006) find a negative association between auditor type and the likelihood of restatement and Cullinan et al. (2010) find a significant negative association between auditor type and the probability of an internal control weakness.

However, Archambeault et al. (2008) document a positive association between auditor type and the likelihood of restatement and Davis et al. (2009) find a significantly positive association between auditor type and the likelihood of meeting or beating analyst forecasts. Given the mixed results concerning the influence of a Big N accounting firm on a client's proclivity to engage in various measures of earnings management as well as the likelihood of the firm having an internal control weakness, I do not predict the sign of the coefficient on the BIG4 control variable.

Insider ownership (INSIDEOWN*)*, that is ownership by management, has the potential to either instigate or prevent earnings manipulation. Agency theory posits that providing equity ownership in the firm encourages management to behave like shareholders, while the theory also predicts that inside ownership can incentivize management to become entrenched and adopt strategies that promote their own interests (Fama 1980; Fama and Jensen 1983). Consequently, I do not predict the sign of the coefficient on INSIDEOWN.

The significant economic consequences of meeting or just beating analysts' forecasts, and the extent of beating, have led management to adopt earnings manipulation practices (Bartov et al. 2002; Barua et al. 2006; Burgstahler & Eames 2006), particularly when management is incentivized through equity compensation (Healy 1985; Bergstresser and Philippon 2006; Du et al. 2007). Extant literature documents a significant positive association between CEO compensation and financial reporting failure (Efendi et al. 2007; Johnson et al. 2007) and between CEO compensation and the proclivity to meet or just beat analysts' quarterly earnings forecasts (Bauman and Shaw 2006). Accordingly, I include the variable CEO_EQ in the model to control for the

extent to which the CEO's compensation package is equity based, and expect it to be positively associated with the likelihood of meeting or just beating, or exceedingly beating, analysts' forecasts.

The variable ACIND represents whether the firm's audit committee is comprised entirely of independent directors. The inclusion of this variable in the model is derived from prior literature documenting a negative association between ACIND and the likelihood of restatement (Abbott et al. 2004; Bedard et al. 2004) as well as the probability of an internal control weakness (Naiker and Sharma 2009; Cullinan et al. 2010). I therefore expect a negative coefficient on the ACIND variable.

Based on prior research indicating that audit committees having members with financial expertise are associated with generally better quality financial reporting (Abbott et al. 2004; Krishnan and Visvanathan 2008; Beasley et al. 2009; Naiker and Sharma 2009; Dhaliwal et al. 2010), I include ACEXPERT in the model to capture whether the sample firm's audit committee has identified an expert or not. I expect this variable to have a negative coefficient. Following recent prior research (Naiker and Sharma 2009; Dhaliwal et al. 2010), I define an expert as an audit committee member who possesses accounting expertise by way of a CPA designation or experience as a financial controller or a chief financial officer.

Finally, I control for the industry in which the firm operates by using the ten industry groups, as defined by Dr. French. The classifications are available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

Test Variables

I use three measures for compensation paid to the audit committee members. First, similar to Archambeault et al. (2008) who also measure their equity compensation variables as percentages of total compensation, I compute the ratio of the average sum of stock and stock options to average total compensation paid to the audit committee as reported by Corporate Library (AC_EQUITY). Audit committee members are given stock options as a means of aligning their interests with those of shareholders in order to more effectively monitor management. However, equity incentives may instead align these directors' interests with those of management in order to capitalize on equity payouts. Unlike other studies that only capture the presence of an equity component in the compensation paid to audit committee directors (Sharma and Iselin 2006; Persellin 2009; Cullinan et al. 2010), I measure this variable continuously in order to assess not only the ability of this variable to impact the likelihood of a firm managing earnings in order to meet or just beat earnings forecasts, but also the *degree* to which the value of equity compensation is related to the likelihood of actual earnings exceeding analysts' forecasted earnings.

Second, cash compensation is measured as the ratio of average total cash compensation to average total compensation paid to the directors on the audit committee (AC_CASH). I include this variable of interest, and employ it as a continuous measure relative to total compensation, for the following reasons. Prior literature has focused primarily on the effects of equity-based compensation on financial reporting quality without also analyzing the effects of cash compensation (e.g., Archambeault et al. 2008; Cullinan et al. 2010). Since a director's total compensation comprises equity, cash, and

other payments, it is not always the case that a high (low) equity component means a low (high) cash component. That is, these two components are not completely inversely related. Third, due to data limitations, prior studies (e.g., Sharma and Iselin 2006) have not been able to measure the cash component in an audit committee director's compensation structure.

The third measure of compensation is a derivative of the two aforementioned variables and is the ratio of the natural logarithm of average total cash compensation to the natural logarithm of average total equity compensation (CASHTOEQ). I adopt this approach because it allows me to test the effects of the relative values of cash and equity compensation against each other. Since I predict that cash compensation has an earnings manipulation reduction effect and equity compensation incentivizes earnings manipulation, this measure will allow for the evaluation of the relative power of cash and equity compensation against each other on earnings manipulation.

Sample and Data for Compensation Analysis

I begin with the universe of firms having a 2007 fiscal year end of December 31 with earnings and forecast data in the I/B/E/S database. I then delete firms with missing firm control variables as well as firms missing data required for deriving the variables of interest. Therefore, the final sample is comprised of the intersection of firms having the necessary data in I/B/E/S, Compustat, and Corporate Library, which yields 1,011 firms.

I limit the sample to 2007 for the following three reasons. First, the focus is on compensation paid to directors on the audit committee. The SEC disclosure rules on director compensation disclosure became effective on December 15, 2006. The Corporate Library database provides more complete director compensation data for fiscal

2007 than for 2006. Second, I focus on 2007 to ensure that any over-reaction, anxiety over compensation disclosure requirements, or lack of clarity pertaining to the new regulation will have settled by then. Companies have traditionally been reluctant to provide executive compensation disclosures and their reaction has been similar for director compensation.[14] Third, I limit the sample to 2007 to avoid the most recent tumultuous period (2008-2009) due to the financial meltdown.[15]

Table 8 Panel A presents the industry distribution of the final sample. The majority of the sample observations are manufacturing firms (36.60%), followed by finance or insurance firms (22.65%), and service firms (14.83%). This distribution is similar to prior research (e.g., Chevis et al. 2007) that examines meeting or beating analysts' forecasts. Panel B illustrates the frequency of forecast errors within the sample. The actual earnings for approximately one third (32.34%) of the sample firms were less than the forecast earnings for the sample period. 195 of the sample firms (19.29%) met, or just beat by one cent, analyst forecasts for the sample period, and the remainder (489 firms, or 48.37%) of the firms exceeded analyst forecasts by a margin greater than one cent.

Results

Table 9 presents the descriptive statistics for the full sample, as well as for two sub-samples of firms partitioned by the full sample median forecast error ($0.01). The results of tests of differences in means between the two sub-samples are also presented. With regard to control variables, the univariate results illustrate firms that exceeded

[14] The Division of Corporate Finance reviewed the compensation disclosures issued by 350 selected firms for the first year under the new disclosure policy, and generally found the disclosures to be lacking prominence as well as presentation of the determinants of the compensation structure (SEC 2007).

[15] Examining one financial period also helps to minimize and control for non-independence effects, heteroscedasticity and auto-correlation.

analysts' expectations to a degree *less* than the full sample's median positive forecast error of $0.01 are significantly different from the firms having a forecast error of equal to or greater than $0.01 in the following ways: they are more leveraged, less profitable, less likely to be audited by a Big 4 firm, and employ management having greater inside ownership.

The univariate results indicate that firms having earnings forecast errors that are *less* than the sample median forecast error of $0.01 compensate the members on the audit committee significantly more in cash as opposed to equity. Specifically, the compensation structure of audit committee members in firms having a forecast error *less* than (*more* than) the median error is comprised of, on average, 48.9% (52.5%) stock and stock options and 45.7% (41.9%) cash compensation[16]. Further, the ratio of cash compensation to equity compensation is significantly greater for firms having forecast error of less than $0.01 compared to firms having a forecast error of greater than $0.01. In summary, the univariate results provide initial evidence of an association between forecast error and how the audit committee is compensated.

Table 10 presents the Pearson correlations between the variables in the model, including all four measures of the dependent variable. The highest correlation, with $\rho = -0.941$, is between AC_EQUITY and CASHTOEQ, which is not surprising. However, since I do not include these two variables together in a model, this does not present a threat of multicollinearity. Excluding the high correlations amongst the dependent

[16] Note that the percentages of average stock and stock option compensation to average total compensation (AC_EQUITY) and average cash to average total compensation (AC_CASH) do not sum to 1. This is because firms in the sample also remunerate with "pension" and "other" types of compensation. Since these types of compensation are in the minority (representing only 4.9% and 6.2% of average total compensation offered in the sample firms), they are excluded from the analysis conducted in this essay.

variables and the variables of interest, only one correlation is above .30, which suggests that multicollinearity is not a problem during regression analysis in any of the models. In addition, I observe that the cash-based compensation measures (AC_CASH and CASHTOEQ) are negatively correlated with all four meat-beat metrics (i.e. the dependent variables), and are significant ($p < 0.05$) for three of the four (BIGBEAT, BIGBEAT_04, and BIGBEAT_05). On the contrary, equity-based compensation is positively correlated with all four dependent variables, but the correlations are significant for only two of them (BIGBEAT_04 and BIGBEAT_05).

Tables 11 reports the results obtained from multivariate logistic regression when the meet-beat metric is meeting or just beating analysts' forecasted earnings by \$0.01 (MB). This model is used to test the H_{3a}, H_{4a}, and H_{5a} hypotheses that pertain to meeting or just beating (\$0.00 ≤ forecast error ≤ \$0.01) analysts' forecasted earnings. The results show that none of the audit committee compensation variables of interest are significant, although the signs of the coefficients are in line with the hypotheses.

Tables 12, 13, and 14 present the results obtained from logistic regression when the dependent variable is set to BIGBEAT, BIGBEAT_04, and BIGBEAT_05, respectively. These models are used to test H_{3b}, H_{4b}, and H_{5b} hypotheses pertaining to the association between audit committee compensation structure and the extent to which the firm exceeds analysts' earnings forecasts. When the dependent variable is set to BIGBEAT (Table 12), the audit committee compensation variables AC_CASH and CASHTOEQ have negative coefficients that are significant at $p < 0.01$ and $p < 0.05$, respectively. AC_EQUITY has a positive coefficient and is significant at $p < 0.10$. When the dependent variable is set to BIGBEAT_04 (Table 13) and BIGBEAT_05 (Table 14), all

three compensation variables are significant as predicted at $p < 0.01$. More specifically, AC_EQUITY is positive and significant while AC_CASH and CASHTOEQ are negative and significant. Overall, this evidence suggests that an association exists between the type and amount of compensation paid to audit committee members and the extent to which the firm exceeds earnings expectations.

Regarding the results associated with the control variables in Tables 12 through 14, ACEXPERT is the only control variable that remains consistently significant in all nine regressions. It is negatively associated with all three beat metrics at the $p < 0.01$ level. These results lend further support to existing literature documenting evidence showing that audit committees that have members with financial expertise are associated with generally better quality financial reporting (Beasley et al. 2009).

LN_TA, LITRISK, and ACIND are consistently not significant in all nine regressions. One explanation for the non-significance of ACIND is that, since my year of analysis is 2007, most audit committees during this period are comprised entirely of independent directors as required by SOX. LEV and MKTBOOK are significant ($p < 0.01$) and negatively associated with the beat metric in six of the nine regressions. While the results pertaining to LEV suggest that highly leveraged firms may be subject to greater scrutiny from debt-holders thus curbing management's temptations to engage in earnings management, the results pertaining to MKTBOOK are counterintuitive. INSIDEOWN is only significantly associated with the beat metric in five of the nine regressions, with p-values ranging from $p < 0.10$ to $p < 0.05$. Interestingly, this control variable is negatively associated with the BIGBEAT and the BIGBEAT_04 dependent variables. These results are contrary to the theory that inside ownership can incentivize

management to become entrenched and adopt strategies that promote their own interests (Fama 1980; Fama and Jensen 1983). However, CEO_EQ is positive and significant, with p-values ranging from $p < 0.10$ to $p < 0.01$, in five of the regressions lending some credence to the theory that management may be incentivized to participate in earnings manipulation when compensated through equity compensation (Healy 1985; Bergstresser and Philippon 2006; Du et al. 2007) and the level of manipulation is associated with the level of equity pay.

Finally, ROA and BIG4 are significant ($p < 0.01$) and positively associated with the dependent variable in only the three regressions, where the dependent variable is set to BIGBEAT. This suggests that more profitable companies, likely audited by Big 4 firms, are more likely to beat earnings expectations by a larger margin.

The aforementioned results collectively present that the type of compensation, whether predominantly equity-based or predominantly cash-based, paid to audit committee directors is significantly related to the extent by which a firm is likely to manage earnings in order to beat analysts forecasts. These findings complement prior research providing evidence implying that cash-based director compensation is more effective in preserving the effectiveness of the audit committee's financial reporting oversight role. The results also extend prior research by documenting that equity-based compensation incentivizes audit committee directors to focus on exceeding earnings expectations by larger margins. This suggests that equity-based compensation motivates independent directors on the audit committee to focus on short-term performance thereby aligning their interests with management. The implication is that equity-based compensation could potentially entrench independent directors who are supposed to

oversee management and encourage cronyism in the boardroom.

Sensitivity Analyses

I conduct a number of sensitivity analyses to confirm the robustness of the results. I begin by performing regressions on two additional measures of the big beat metric. Following Cheng and Warfield (2005), I run additional regressions where BIGBEAT_03 (forecast error ≥ $0.03) or BIGBEAT_06 (forecast error ≥ $0.06) is set as the dependent variable. Table 15 (Table 16) present the results of the model when the dependent variable is set to BIGBEAT_03 (BIGBEAT_06). In both cases, the coefficients on the audit committee compensation variables retain their expected sign and the variables are significant; AC_EQUITY is positive and significant at $p < 0.01$, and AC_CASH and CASHTOEQ are negative and significant at $p < 0.01$. In addition, the variables retain their directional association with the dependent variables and become increasingly significant as the margin of forecast error increases (i.e. significance increases when the dependent variable changes from BIGBEAT_03 to BIGBEAT_06). With regard to the control variables, the results obtained when BIGBEAT_03 is the dependent variable are similar to those obtained when the dependent variable is set to BIGBEAT_04, with the following differences. The coefficients on ROA and BIG4 are positive and become significant at $p < 0.01$ and $p < 0.05$, respectively. These results indicate a significant, positive association between firm profitability and auditor type only when actual earnings exceed forecasted earnings by $0.03 or more. INSIDEOWN becomes significant at $p < 0.01$, lending further contradictory evidence concerning the potential for earnings management when inside ownership is present (Fama 1980; Fama and Jensen 1983). The results obtained when BIGBEAT_06 is set as the dependent variable are qualitatively

similar to the results obtained when BIGBEAT_05 is the dependent variable, with no change in significance in any of the control variables.

I also run the regression with BIGBEAT_07 (beat is equal to or greater than $0.07) set as the dependent variable. The results obtained, which are not tabulated, are qualitatively similar to those obtained when the dependent variable is set to either BIGBEAT_05 or BIGBEAT_06.

Next, given that "[i]nternal governance structures are established to maintain the credibility of firms' financial statements and safeguard against such behavior as earnings manipulation" (Dechow et al. 1996, 4), I control for three additional measures of corporate governance in the models where the dependent variable is set to BIGBEAT_04 or BIGBEAT_05 to see if the directions of the coefficients and the significance of any of the variables of interest change. Since the board of directors plays an important role in establishing the internal controls of financial reporting (Beasley 1996; Farber 2005; Krishnan 2005), I control for board independence (LN_BDOUTSIZE), board diligence (LN_BDMTGS), and long-term board tenure (PCT_BDTEN15). LN_BDOUTSIZE is defined as the natural logarithm of the number of outside directors on the board during the year of analysis, LN_BDMTGS is the natural logarithm of the number of the total number of meetings held by the board of directors during the year of analysis, and PCT_BDTEN15 is the percentage of directors having tenure on the board of greater than 15 years as of the year of analysis. LN_BDOUTSIZE and LN_BDMTGS are significantly positive ($p < 0.01$) in all six regressions with no change to the main results. These results suggest that firms with more independent, diligent boards of directors exceed earnings forecasts to a larger extent, which conflicts with most evidence obtained

in studies concerning board independence and earnings management (Dechow 1996; Klein 2002). With regard to PCT_BDTEN15, I include it in the model to capture the potential degradation in the quality of financial reporting oversight that may be attributed to long-tenured directors. The coefficient on this variable is not significant in any of the regressions, and the main test results do not change.

Finally, I perform the following size-related tests. I partition the sample into two groups based on total assets (below, and equal to or above, the median value of the natural logarithm of total assets) and perform separate regressions, 24 regressions in total (three for each of the four different meet-beat or large beat metrics, for each of the partitioned sub-samples). For ease of discussion, I refer to the sub-sample having a measure of LN_TA less than (equal to or greater than) the median value as "smaller" ("larger") firms. For the larger firms, the coefficients on the variables of interest are significant ($p < 0.01$) at directional expectations when the dependent variable is MB, but are not significant (however directions remain in line with expectations) when the dependent variable is BIGBEAT, BIGBEAT_04, or BIGBEAT_05 (with the exception of AC_CASH, which is negative and significant at $p < 0.10$ when the dependent variable is BIGBEAT_05). The results for smaller firms are in the reverse; the model is not significant when the dependent variable is set to MB, however the variables of interest are significant ($p < 0.01$), and as predicted, when the dependent variable is BIGBEAT_04 or BIGBEAT_05. When the dependent variable is BIGBEAT, the only variable of interest that is significant, as predicted, is AC_CASH ($p < 0.10$).

The aforementioned size-related results offer some interesting insights. They collectively present that the type of compensation, whether predominantly equity-based

or predominantly cash-based, paid to audit committee directors is significantly related to the likelihood of meeting or just beating earnings forecasts in larger firms, and is significantly related to the extent by which a firm is likely to manage earnings in order to beat analysts forecasts in smaller firms. These results may be indicative of different types of pressures that differentially sized firms might face. For instance, consistent with prior research, management in larger firms may manipulate earnings just enough to either meet or just beat earnings forecasts so as to not experience the negative economic consequences associated with missing such a benchmark (Bartov et al. 2002; Barua et al. 2006; Bauman and Shaw 2006; Burgstahler & Eames 2006), whereas management in smaller firms may be attempting to artificially "grow" firm valuation through manipulating earnings in order to exceed earnings forecasts to a larger extent. In either case, the type of compensation paid to the firm's audit committee directors plays an important role in curbing such behavior.

Conclusion

In this essay, I find evidence suggesting a significant association between audit committee compensation and meeting or beating analysts' forecasts. Specifically, I find that neither cash nor option/equity-based compensation is significantly associated with the likelihood of meeting or just beating analysts' earnings forecasts. However, I observe that greater equity in the compensation structure is positively associated with the likelihood of actual earnings beating forecasted earnings by a greater margin ($0.04 and $0.05). Conversely, greater cash compensation in the pay structure of independent directors on the audit committee is inversely related to the likelihood of actual earnings exceeding forecasts by a large margin. These findings suggest that compensation plans

comprised predominantly of cash, as opposed to stock and stock options, are "best" at preserving objectivity in financial reporting oversight tasks performed by the audit committee. I posit that since equity-based (cash-based) compensation is (is not) tied to the financial performance of the firm, it is, therefore, more (less) likely to incentivize directors to align their interests with those of managers.

My results suggest interesting avenues for future research. One avenue is to assess whether auditors share the same concerns with regard to the effects of director equity compensation and investigate if auditors price audit services higher for firms that compensate their directors primarily through incentive-based pay.

Another option is to further explore the results associated with larger versus smaller firms. The evidence documented in the first essay suggests that auditors view smaller firms as bearing more risk of auditor litigation. One explanation for this finding, to be empirically supported via future research, is that auditors are aware of the unique pressures that smaller as opposed to larger firms face, and may thus price their audits accordingly.

An additional avenue for future research is to confirm the results documented herein in performing regression analysis by replacing the current dependent variables with a different empirically derived measure of earnings management (i.e. discretionary accruals) and determine if results associated with the test variables remain unchanged.

CHAPTER V: AUDIT COMMITTEE CHARACTERISTICS AND REPEATEDLY MEETING OR BEATING ANALYST FORECASTS

In an effort to identify what constitutes a "good" audit committee, DeFond and Francis (2005) and Carcello et al. (2011) call for additional research addressing specific characteristics of the audit committee beyond independence and expertise. Audit committee member tenure and the number of other directorships are two issues that have received increasing attention from effective governance advocates and others in recent years.

DeZoort et al. (2002, 66) call for an enhancement of the richness of audit committee composition measures, specifically suggesting, "research could address whether …current audit committee tenure affects overall ACE [audit committee effectiveness]." A survey by Heidrick and Struggles (2007) finds that 21 percent of companies had a term-limit policy for directors, and that this proportion had doubled since 2000. Shareholder activists have recently put forth proposals at many companies concerning placing a limit on the number of years a director can serve.[17] Reflecting this trend, publications issued by the Big 4 now discuss audit committee director tenure issues (PricewaterhouseCoopers 2000; Deloitte 2010). For example, Deloitte (2010) notes in its *Audit Committee Brief* that "[t]o be most effective, audit committees should periodically reassess the optimal mix of committee members, taking into account…the skills, experiences, diversity, time commitments, tenure, and rotation of its members." Such views are similar to those expressed by other academics (Lapides et al. 2007).

[17] AT&T, American Express, Home Depot, Pfizer and United Technologies are some examples of companies that have had shareholder proposals related to director term-limits in recent years.

During the Senate hearings related to the Enron failure, senators and others raised the possibility of limiting the number of boards a director could serve on at any time (U.S. Senate 2002b). Increasingly, companies are having formal policies that restrict the number of other directorships that can be held by their outside directors. For example, General Motors noted in its 2007 proxy statement that under its Corporate Governance Guideline No. 13, "non-management directors are encouraged to limit the number of other boards of U.S. public companies on which they serve, to no more than four.... Moreover, the Directors and Corporate Governance Committee and the Board annually review whether members of GM's Audit Committee serve on audit committees of other companies, and whether that service compromises their ability to fulfill their duties on GM's Audit Committee."

Thus, there is now an increased focus on audit committee member characteristics beyond independence and financial expertise. Along these lines, Carcello et al. (2011) note that "for good audit committees, most of the focus is on audit committee financial expertise and independence" and suggest that there is a "need to develop better measures of board and audit committee characteristics." Yet, there is limited prior research on audit committee member tenure and "busyness." Yang and Krishnan (2005) find that earnings management is lower when audit committee members have longer tenure and have multiple other board memberships. In contrast, Dhaliwal et al. (2010) show that accruals quality is positively related to lower tenure and fewer board memberships of the audit committee financial expert. In addition, Barua et al. (2010) find that the extent of investment in internal auditing is higher when audit committee members have shorter tenure. Sharma and Iselin (2006) find that restatements are less likely when audit

committee members have multiple board memberships, but Sharma et al. (2009) find that multiple directorships are negatively associated with audit committee meeting frequency.

Thus, the results from prior studies, which are discussed in detail in the following section, are not consistent. In addition, data from four of the above five studies are from the pre-SOX period when there was also greater variation in audit committee member characteristics, such as independence and the presence of financial experts. Given the recent increased focus on audit committee director tenure and busyness, in this essay I examine the association between these two audit committee characteristics and the likelihood that a company will repeatedly meet or just beat earnings forecasts versus repeatedly just missing earnings forecasts.

Prior Literature and Development of Hypotheses

The SEC (1999a) noted that "audit committees play a critical role in the financial reporting system by overseeing and monitoring management's and the independent auditors' participation in the financial reporting process." Thus, the audit committee serves as an important monitoring mechanism in ensuring high quality financial reporting and can influence whether a firm will have the ability to engage in the meet-beat strategy of earnings management.

In their detailed summaries of research related to audit committees, DeZoort et al. (2002), DeFond and Francis (2005), and Carcello et al. (2011) note that almost all research related to audit committee composition has focused on independence and financial expertise. While earlier research on audit committees focused on independence, listing-related regulatory changes mandated by the NYSE and NASDAQ in 1999 (SEC 1999b, 1999c) and the requirement in SOX that all audit committee members be

independent has led to a focus on audit committee financial expertise in more recent research. Generally, prior research finds audit committees that have financial experts and that are diligent are associated with higher quality financial reporting and auditing using a variety of measures, such as fraudulent financial reporting, accruals, internal controls and going-concern reporting.

For example, Abbott et al. (2000) obtain a sample of 78 firms that were sanctioned by the SEC for fraud or aggressive accounting, through the SEC Accounting and Auditing Enforcement Releases (AAERs), during the period of 1980 through 1996. The authors then obtain a control group by matching based on industry (determined primarily by four digit SIC code), size (determined primarily on the market value of equity), year, and national exchange, yielding a final analysis sample size of 156 firms. Logistic regression is employed, with the dependent variable indicating whether the firm is a sanctioned firm and two test variables pertaining to audit committee independence and number of annual meetings. The authors document a positive and significant association between audit committee independence and frequency of annual meetings and the likelihood of being sanctioned.

Carcello et al. (2008) find a significant negative association between the presence of a financial expert on the audit committee and the level of earnings management, and this association is more pronounced when the financial expert has accounting-related work experience. They obtain these results through the employment of regression whereby the dependent variable is the natural logarithm of the absolute value of discretionary accrual measure. The authors utilize the Compact D/SEC database to obtain a final sample of 283 firms with a fiscal year end between July 15, 2003 and

December 31, 2003, that are traded on the NYSE, Nasdaq's National Market (NNM), and Nasdaq's Small Cap Market (SCM), and that possess all necessary data in proxy statements and the Compustat database.

Krishnan (2005) examines the relation between the likelihood of internal control deficiencies and three specific characteristics pertaining to audit committee quality: size, independence, and expertise. The author uses logistic regression to test his hypotheses. The measure for the dependent variable, which indicates the presence or absence of internal control problems, is derived from 8-K reports. Thus, the test sample of 128 firms is comprised of companies that switched auditors and reported internal control deficiencies in the Form 8-K, with a control sample of firms that filed a Form 8-K (i.e. changed auditors) but did not report an internal control problem. Internal control and financial data is obtained from the Disclosure, Inc. database and audit committee data is obtained from firm proxy statements and 10-K reports. The authors find a significant negative association between audit committee independence and expertise and the likelihood of an internal control deficiency.

Naiker and Sharma (2009) analyze the effect of a particular kind of audit committee expert by studying the association between former audit partners, both affiliated with and unaffiliated with the external auditor, serving on the audit committee and the likelihood of internal control deficiency. Their sample is comprised of 1,225 firms that are deemed "accelerated filers" wither regard to making SOX Section 404 internal control disclosures for the fiscal year 2004. Internal control deficiency data, financial data, and governance data are obtained from the Audit Analytics database, the Compustat database, The Board Analyst database, respectively. The authors employ logistic regression where the

presence of an internal control deficiency is a function of affiliated and non-affiliated auditor partners on the audit committee and additional financial control variables, and find a statistically significant negative association between the likelihood of disclosing an internal control problem and the presence of either an affiliated or non-affiliated audit partner as the expert on the audit committee.

In their logistic regression analysis pertaining to audit committee independence and the likelihood of receiving a going-concern modified opinion, Carcello and Neal (2000) find a statistically negative relation between the percentage of directors affiliated with the company and the probability of a going-concern report, suggesting that affiliation compromises financial reporting objectivity. The authors use the Compact D/SEC database to identify firms that are in financial distress, excluding financial firms, but haven't filed bankruptcy prior to the analysis year of 1994. The final sample is comprised of 223 firms having the necessary proxy and financial data available in the Q-Data SEC files.

Collectively, this stream of research suggests that firms with independent audit committees and audit committees with financial experts provide better financial reporting quality.

Audit committees can also influence management's ability to engage in earnings management through the extent of their support for the positions of the external auditor. Carcello and Neal (2003) study the association between audit committee independence and auditor dismissal following a new going concern report. They employ logistic regression, where the incidence of auditor dismissal is the dependent variable and the percentage of affiliated audit committee members as the test variable. The final sample is

comprised of four sub-samples initially derived from the Compact D/SEC database. The primary test sample contains companies that received a new going concern report from a Big 6 auditor during the period of 1988 to 1999 and that dismissed their auditor prior to the issuance of the client's financial statements for the following year. This final sample size is 62. A control group is obtained of firms also receiving a new going concern report during the same window of analysis but did not dismiss the auditor. In addition, two sets of "benchmark" samples were obtained of firms receiving clean opinions; those that did, and those that did not dismiss their auditors. The final sample size of all four sub-sample groups, all of which exclude financial firms, is 374 firms. The authors find that audit committees that are more independent (i.e. have less affiliated directors) are more likely to prevent auditor dismissal following a new going concern report.

DeZoort et al. (2003) conduct an experiment, based on 55 usable responses to questionnaire materials sent to 362 directors, in which audit committee members make evaluations pertaining to materiality justification and accounting precision. Using a 2x2 between subjects design, the authors find that audit committees with financial experts are more likely to support the external auditor.

In summary the aforementioned analyses conducted by Carcello and Neal (2003) and DeZoort et al. (2003) provide evidence suggesting that audit committees comprised of directors that are experts and are non-affiliated are more effective in performing financial reporting oversight tasks.

In this study, I focus on two issues related to audit committee composition that have started receiving attention from corporate governance advocates and others yet have received sparse attention in prior research: tenure on the audit committee and the number

of other corporate boards simultaneously served on by audit committee directors.

Audit Committee Member Tenure

During the Enron hearings, Charles Elson, Director of the Center for Corporate Governance noted that:

> "[T]here is concern about the length of directors' terms. Directors who are on a board for too long, are viewed as becoming effectively tired, not as sharp as they once were in reviewing the company and much more willing to accept management representations than not. That is why a number of folks have called for term limits for directors." (U.S. Senate 2002b)

Directors with longer tenure are likely to be more closely affiliated with management and less likely to challenge management decisions (Boeker and Goodstein 1993). Vafeas (2003) studies 483 non-financial and non-utility firms listed on the 1994 Forbes list and asserts that term limits for board members should be considered by regulators. This argument is in light of the author's evidence, obtained through OLS regression of board characteristics on various measures of CEO pay, that long-tenured board members, as opposed to short-tenured members, are more closely affiliated with management as exhibited by long-tenured members' proclivity to approve higher compensation to the CEO.

While the above arguments relate to directors in general, it is likely that they are particularly applicable in the case of audit committee directors. The *21st Century Governance and Financial Reporting Principles* (Lapides et al. 2007), endorsed by the Institute of Internal Auditors, recommends that "the board should consider limiting the number of years an individual can serve on the audit committee to ensure adequate rotation of its members." DeZoort et al. (2002) note the paucity of research related to director tenure and suggest that future research address whether audit committee member

tenure affects overall audit committee effectiveness. Yang and Krishnan (2005) find that earnings management is less likely when audit committee members had longer tenure. The authors obtain these results through the execution of OLS regression in which a measure of quarterly discretionary accruals is the dependent variable and various characteristics of the audit committee serve as the test variables. Their final sample comprises 731 firm-year observations during the period of 1996 through 2000. Necessary data is obtained from firm proxy statements, the I/B/E/S database, and the Compustat database.

Conversely, Dhaliwal et al. (2010), using a final sample of 770 firms with data available for the period 2004 through 2006, obtained from The Board Analyst and the Compustat databases (excluding banks, financial institutions, utilities, and firms in regulated industries), regress variables representing multiple audit committee characteristics on accrual quality. The authors document evidence suggesting a "profound" negative association between audit committee director tenure and accrual quality.

The above discussion suggests the following hypothesis (stated in the null form):

H_6: The likelihood of a company repeatedly engaging in the Meet-or-Just-Beat strategy of earnings management is not related to audit committee director tenure.

Number of Other Directorships Held by Audit Committee Members

Fama (1980) and Fama and Jensen (1983) suggest that the number of other board memberships can be viewed as a signal of the market's assessment about a particular director. Under this reputation argument, directors establish reputations for being effective monitors and are rewarded with additional directorships. Thus, the higher the

number of other board memberships, the greater the expertise of a director and the better the quality of monitoring provided by a director.

The counterpoint is that too many board memberships spread a director thin, and thus reduces the quantity and/or quality of the oversight provided by the director. For example, during the Enron hearings held by the Permanent Subcommittee on Investigations of the U.S. Senate's Committee on Governmental Affairs, the Senators posed the following written question to some witnesses:

> "Some directors of the Enron Board have been criticized for their membership on numerous boards, calling into question their ability to dedicate time and focus to issues at Enron. Would you be in favor of limiting the number of corporate boards an individual may serve simultaneously?" (U.S. Senate 2002b)

This view is espoused, among others, by the National Association of Corporate Directors (NACD 1996), Council of Institutional Investors (CII 1998), and the New York Stock Exchange (SEC 2003).

In the context of audit committees, Yang and Krishnan (2005) find that earnings management is lower at firms where the audit committee directors serve on multiple boards, but Dhaliwal et al. (2010) show that accruals quality is positively related to accounting experts who hold low levels of multiple directorships. (Please see the previous section pertaining to the discussion of the H_6 hypothesis for a detailed presentation of the research design of these two aforementioned studies).

Sharma and Iselin (2006) identify 75 firms having the necessary data for analysis contained in proxy statements and Compustat and that announced a restatement between January 1, 2001 and December 31, 2002. The announcements were reported by the General Accounting Office (GAO) and relate to fiscal years 1999 through 2001. After

obtaining a control group matched on year, four-digit SIC code, and size (total assets), the authors implement logistic regression and find that the likelihood of restatement is negatively associated with the presence of audit committee members who sit on more than three other boards. This evidence suggests that restatements are less likely at firms where audit committee members have multiple board memberships.

Conversely, Fich and Shivdasani (2007) show that "busy boards" significantly increase a firm's probability of facing financial litigation. These results are obtained by identifying firms from the PricewaterhouseCoopers class action database and the Stanford University and Cornerstone Research litigation database that are involved in shareholder class-action law suits alleging financial fraud. The sample period is from 1998 to 2002 and the sample selection process yields a final sample size of 216 unique firm observations. The CRSP, Compustat, and ExecuComp databases are used to obtain necessary dependent variable, test variable, and control variable measurements.

Given such inconsistent evidence regarding simultaneous multiple board service, I do not make a directional prediction for my next hypothesis. Thus, the last hypothesis, in the null form, is:

> ***H_7: The likelihood of a company repeatedly engaging in the Meet-or-Just-Beat strategy of earnings management is not related to the number of additional board memberships held by audit committee directors.***[18]

[18] I note that for my first hypothesis in this essay (H_6) I focus on the number of years of service on the *audit committee* but for the second hypothesis (H_7) I focus on the number of additional *board* memberships. I do this for two reasons. The first reason is to be consistent with the approach taken in prior research (e.g, Yang and Krishnan 2005; Barua et al. 2010; Dhaliwal et al. 2010). The second reason is the fact that, among others, the suggestions of Lapides et al. (2007) and Deloitte (2010) focus on *audit committee tenure* presumably because a new member on the committee may be more likely to view things from a different perspective and/or may be more skeptical. However, for hypothesis two I focus on the total number of additional *board memberships* because in the case of busy-boarding related discussions, the focus is on the time it takes to serve on boards; further, very few directors serve on more than three audit committees.

Model

I base the empirical model on prior research seeking to explain the likelihood of firms engaging in the meet/just beat strategy of earnings management. The model is as follows:

$$MB = \beta_0 + \beta_1*HORIZON + \beta_2*FORSTD + \beta_3*NUMANALY + \beta_4*LEV + \beta_5*LITRISK + \beta_6*MTOB + \beta_7*LOGMKTVAL + \beta_8*LOSS + \beta_9*BIG4 + \beta_{10}*ACSIZE + \beta_{11}*ACXPRT + \beta_{12}*ACMEET + \beta_{13}*ACTENURE + \beta_{14}*ACBUSY + \varepsilon$$

where:

MB = 1 if actual earnings reported repeatedly exceeds the analyst's forecast by one cent per share or less (i.e., \$0.00 ≤ forecast error ≤ \$0.01), 0 otherwise (see below, following description of the sample, for a more detailed explanation of "repeated");

HORIZON = forecast horizon, measured as number of days between earnings announcement and the day the most recent earnings forecast was made;

FORSTD = forecast dispersion, calculated as the standard deviation of earnings forecasts during the 4th quarter of 2007;

NUMANALY = number of analysts making an earnings forecast during the 4th quarter of 2007;

LEV = leverage, equal to total liabilities divided by total assets;

LITRISK = 1 if firm's primary SIC code is 2833 – 2836, 3570 – 3577, 3600 – 3674, 5200 – 5961, or 7370 – 7370, 0 otherwise;

MTOB = market to book ratio, calculated as stock price at fiscal year-end divided by book value per share;

LOGMKTVAL = natural logarithm of market value of equity;

LOSS = 1 if the firm had a net loss for fiscal year 2007, 0 otherwise;

BIG4 = 1 if auditor is a Big 4 auditor, 0 otherwise;

ACSIZE	=	square root of the number of audit committee members during 2007;
ACXPRT	=	square root of the number of audit committee financial experts during 2007;
ACMEET	=	square root of the number of audit committee meetings during 2007;
ACTENURE	=	ratio of the number of members serving on the audit committee for more than 7 consecutive years as of 2007;
ACBUSY	=	ratio of the number of members on the audit committee who hold more than three outside directorships during 2007.

Before I discuss the rationale for including the control variables in the model, I note that as part of the sensitivity tests I use a variety of different measures for the audit committee related variables.

Prior research has shown that the closer the earnings forecast is made to the earnings announcement, the smaller the forecast error (Crichfield et al. 1978; O'Brien 1988; Brown 1991; Sinha et al. 1997). Since earnings forecasts and forecast revisions occur at different times for different firms, I include the variable HORIZON to capture the number of days between the earnings announcement day and the most recent earnings forecast available. Given that more recent forecasts, or forecasts with a smaller horizon, tend to be more accurate, I expect the coefficient on HORIZON to be negative in the above regression.

I attempt to control for cross-sectional differences in the information environment that may affect forecast accuracy by including the following variables: forecast dispersion (FORSTD) as measured by the standard deviation of all forecasts issued for

the firm during the fourth quarter, the number of analysts following the firm (NUMANALY), as well as the logged market value of the firm (LOGMKTVAL) as a measure of firm size. Forecast dispersion captures the degree of uncertainty that analysts have about the performance of the target firm, so I anticipate the coefficient of FORSTD to be negative. Conversely, since the number of analysts following a firm represents the degree to which a firm is followed, I anticipate the coefficient of NUMANALY to be positive. It can be argued that larger firms have more resources to engage in the meet-beat strategy of earnings management. Therefore, I expect the coefficient on LOGMKTVAL to be positive. These directional predictions are based on results from prior research, which show that forecast horizon and dispersion are negatively related to forecast accuracy but positively related to firm size and the number of analysts following the firm (Atiase 1985; Lys and Soo 1995; Brown 1997; Cheng and Warfield 2005; Chevis et al. 2007; Davis et al. 2009).

Chevis et al. (2007) find that the likelihood of meeting or just beating forecasts is positively associated with highly leveraged firms. I therefore include leverage (LEV) as a control variable and expect the coefficient to be positive. Following Cheng and Warfield (2005) and Frankel et al. (2002), I include variables to capture the growth of the firm as represented by the firm's market-to-book ratio (MTB), whether the firm operates within a litigious industry (LITRISK), and whether the firm experienced a loss for the fiscal year (LOSS). In their analysis of equity incentives and the probability of meeting or just beating analysts' forecasts by $0.01, Cheng and Warfield (2005) find that growth is significantly and negatively associated with the likelihood to meet or just beat earnings forecasts, while firms in litigious industries are more likely to meet or just beat forecasts.

Frankel et al. (2002) find that firms reporting small earnings surprises are less likely to meet or just beat earnings forecasts. I predict the coefficients of MTOB and LOSS to be negative, and the coefficient of LITRISK to be positive.

I include three other audit committee related variables in our model. I include ACSIZE because as the number of audit committee members increases it is likely that the extent of audit committee oversight will increase (Raghunandan and Rama 2007). Based on prior research indicating that audit committees that have members with financial expertise are associated with generally better quality financial reporting (Beasley et al. 2009), I include ACXPRT in the model and expect this variable to have a negative coefficient. Audit committees that hold more frequent meetings are said to be more diligent and more effective in their monitoring (DeZoort et al. 2002; Carcello et al. 2011). Based on the above, I expect that more frequent audit committee meetings lead to better monitoring and less earnings management; hence, I expect the coefficient of ACMEET to be negative.

Sample and Data

Table 17 describes the sample selection process. I begin by obtaining the universe of December 31 year-end firms having earnings and forecast data in the I/B/E/S database during the twelve quarters beginning in January 2005 and ending in December 2007.[19]

Analysts make their earnings forecasts throughout the year, making revisions as they receive new earnings-relevant information concerning their target firms.

[19] I stop with 2007 because I also wanted to examine if the propensity to repeatedly meet or just beat or repeatedly miss analyst forecasts is associated with subsequent negative restatements. Since, on average, it takes more than two years before most subsequent restatements are disclosed, I stopped with fiscal year 2007. However, my subsequent analysis indicates that only 8 of the 156 sample firms (selected as described below) had a negative restatement until June 30, 2010, reinforcing the earlier suggestion that restatements are relatively infrequent.

Consequently, forecasts issued closer to the earnings announcement date are based on a richer information set and thus tend to be more accurate than the preceding forecasts (Sinha et al. 1997). Prior studies have documented this positive association between forecast recency and forecast accuracy (Crichfield et al. 1978; O'Brien 1988; Brown 1991; Sinha et al. 1997). Hence, I use the most recent forecast issued prior to the earnings announcement date as the analyst forecast measure.

I then calculate the forecast error, as actual earnings per share less forecasted earnings per share. Meeting or just beating (just missing) analyst earnings expectations are firm-quarter observations for which actual earnings reported either meets or exceeds (misses) the analyst's forecast by a cent per share or less, i.e., $\$0.00 \leq$ forecast error $\leq \$0.01$. After removing irregular observations or observations with missing data and foreign firms, I obtain an initial sample of 3,205 firms.

I delete 45 firms with either missing proxy data or missing control variable data in Compustat. In addition, I delete two firms that switched to a non-December 31 fiscal year end during the analysis period, and one outlying firm.[20] This process yields a final overall sample of 3,157 firms.

Table 18 provides empirical evidence about the number of quarters in which firms either meet or just beat analyst forecasts, or just missed analyst forecasts. The table shows that 727 of the 3,157 firms (23.03%) did not meet, just beat, or just miss even once during the 12 quarters examined in this study.

[20] This firm was deemed an outlier at the sub-group regression analysis stage. It had a market-to-book ratio value that was approximately 40 times the size of the average ratio for the Just Miss group.

The data in Table 18 show a very interesting pattern. While 2,204 of the 3,157 firms (69.81%) either meet or just beat analyst forecasts at least once during the 12 quarters, only 1,277 firms (40.45%) just missed analyst forecasts at least once during the same time period. Similarly, 563 of the 3,157 firms (17.83%) meet or just beat analyst forecasts at least four times during the study period; in contrast, only 34 of the 3,157 firms (1.08%) just missed analyst forecasts at least four times during the 12 quarters. Overall, fewer firms are likely to just miss than to meet or just beat analyst forecasts.

I then partition the overall sample of firms into repeated "Meet/Just Beat" and repeated "Just Miss" groups. A firm is classified as a repeated Meet/Just Beat firm if it had a net meet or just beat count of at least 7 out of the 12 quarters. Thus, a firm that met or just beat the earnings forecasts by \$0.01 for 9 of the 12 quarters but also just missed forecasts by \$0.01 for 2 of the 12 quarters is still considered a repeated Meet/Just Beat firm. A firm is classified as a repeated Just Miss firm as long as the firm misses the earnings forecast by \$0.01 or less, at minimum, a net of 2 out of the 12 quarters. Thus, a firm that just missed the earnings expectation for 5 out of 12 quarters, but also met or just beat expectations for 3 of the 12 quarters is considered a repeated Just Miss firm. The above process yields 77 repeated Meet/Just Beat firms and 79 repeated Just Miss firms.[21]

All audit committee data are hand-collected from the firms' proxy statements obtained from the SEC's website. After deleting observations with missing data for variables in the regression model, the final sample for the regression analysis includes 75

[21] I recognize that the above process is somewhat arbitrary. However, because I have to hand-collect audit committee related data, I wanted the sample to be of manageable size. Further, the very definition of "repeated" implies more than two, so I used the "net of 2" for the repeated Just Miss firms; using a net of 3 or more for the Just Miss firms drastically reduces the sample size of this group. With respect to the repeated Meet/Just Beat firms, I used alternative cutoffs (net of 8 or 9 quarters); the results with such alternative cutoffs are similar to those reported in this essay.

firms that repeatedly meet or just-beat analyst forecasts and 64 firms that repeatedly just missed analyst forecasts.

Results

Table 19 presents univariate results of differences between the two groups. The repeated Meet/Just Beat firms have a shorter forecast horizon ($p < .10$), less forecast dispersion ($p < .01$), lower leverage ($p < .05$), and higher market value ($p < 0.01$); the repeated Meet/Just Beat firms also are more likely to be in risky industries ($p < .05$), and less likely to have losses ($p < 0.05$).

Turning to audit committee related variables, there are no significant differences between the two groups in terms of the number of audit committee directors, the number of experts, or the number of meetings. Further, the proportion of audit committee directors with more than three other board memberships is not significantly different between the two groups. However, the repeated Meet/Just Beat group of firms has a higher proportion of long-tenured audit committee members ($p < .01$).

Table 20 reports the results obtained from regression analysis. The explanatory power of the model, as measured by the Pseudo R^2, is 0.50; this is in line with those reported in prior research relating to meeting-beating analysts' forecasts (Cheng and Warfield 2005; Chevis et al. 2007; Davis et al. 2009).

Consistent with expectations, the likelihood of a firm repeatedly meeting or just beating analysts' forecasts is negatively associated with number of days between the earnings forecast and the earnings announcement (HORIZON), forecast dispersion (FORSTD), market-to-book ratio (MTOB), loss (LOSS) and a Big 4 auditor (BIG4). Also consistent with expectations and prior research, the likelihood of engaging in

repeated meet/just beat behavior is positively associated with firm size (LOGMKTVAL) and industry type (LITRISK).

With respect to the audit committee variables, consistent with expectations, the coefficients of ACSIZE, ACXPRT and ACMEET are negative and significant indicating that meeting or just beating analysts' forecasts is less likely in firms that have audit committees that have more (a) members, (b) experts, and (c) meetings. The coefficient of ACTENURE is negative and significant indicating that when the audit committee has a higher proportion of long-tenured members there is a higher likelihood of a firm repeatedly meeting or just beating analysts' forecasts. This result is consistent with the management-friendliness hypothesis; that is, long tenured outside directors become friendly with organizational management thereby creating a less stringent oversight environment. The coefficient of ACBUSY is also negative and significant, indicating that as the proportion of directors who serve on more than three boards increases, the likelihood of the firm repeatedly meeting or just beating analyst forecasts increases. This evidence supports the argument espoused by good governance advocates that companies should consider limiting the number of boards on which audit committee members serve concurrently.

Sensitivity Analyses

I perform the following additional analyses as part of my sensitivity tests. First, I recognize that the use of seven years (for audit committee director tenure) and more than three boards (for concurrent directorships) is necessarily arbitrary. Hence, I use a number of other cutoff measures. For the tenure variable, I use the following alternative cutoffs: five years and ten years. With each of these alternative measures, the ACTENURE

variable remains negative and significant (as in Table 20). However, for the ACBUSY variable, when I use more than two as the cutoff (instead of more than three), ACBUSY is not significant at conventional levels. Thus, it appears that the difference arises once a director sits on more than three boards. In such alternative regressions, the sign and significance of the other variables in the model are generally similar to those presented in Table 20.

Next, instead of using the proportion of audit committee members with tenure or board memberships above a specific threshold, I use the average tenure and board membership measures for the audit committee. With this alternative specification, the ACTENURE variable is once again negative and significant but the ACBUSY variable is not significant.

Some prior studies use dummy variables for audit committee related variables (e.g., if the committee met more than a specified number of times a year). Further, some other studies have sought to distinguish between accounting experts and other types of experts (e.g., Dhaliwal et al. 2010). Hence, I use dummy variables for meetings and experts, in lieu of ACMEET and ACXPRT, as follows: ACMEETD = 1 if the committee met more than the median number of meetings (8) of the sample, 0 otherwise; ACACCXPRT = 1 if an accounting expert is present on the audit committee, 0 otherwise.[22] With such alternative specification of the regression model, I find that ACMEETD is negative and significant but ACACCXPRT is not significant. More importantly, the significance of the variables of interest, namely ACTENURE and ACBUSY remains substantively

[22] I define an accounting expert as someone who has experience as an auditor or as a senior corporate executive in accounting or finance (e.g., CFO, CAO, VP-Finance, etc.)

similar to those presented in Table 20.

I include an additional control variable measuring internal control quality in the regression model. I define this dummy variable as follows: ICW = 1 if there is a material weakness in internal controls for fiscal year 2007, 0 otherwise. ICW is not significant in the model, and the sign and significance of the other variables remains substantively similar to those presented in Table 20.

Conclusion

In this essay, I examine the propensity of 3,157 firms to meet or just beat, or just miss, analyst forecasts by $0.01 or less during 2005 through 2007. I find that firms are much more likely to repeatedly meet or just beat analyst forecasts than to repeatedly just miss analyst forecasts. In the analyses, I find that audit committee director tenure is positively associated with the likelihood of a firm repeatedly meeting or just beating analyst forecasts. This finding holds whether I use the average number of years of audit committee member tenure, or the proportion of directors with more than five, seven, or ten years of audit committee tenure. These results provide strong support for the argument that too long a service may lead to audit committee members becoming less vigilant or more permissive of earnings management, and support calls (e.g., Lapides et al. 2007) to restrict the tenure of directors on the audit committee.

My results for the number of other directorships held by audit committee members is mixed: when I use the proportion of directors holding more than three other board memberships, the *ACBusy* variable is positive and significant in the regression, indicating that audit committees that have a higher proportion of members with four or more other board memberships are less likely to prevent earnings management. However, when I

use the average number of board memberships, or the proportion of audit committee directors holding more than two other directorships, the *ACBusy* variable is not significant in the regression. Since the NYSE and others have typically sought to limit the number of board memberships to four, the results may be viewed as providing partial support for efforts seeking to limit busy-boarding by audit committee directors.

My results suggest avenues for future research. One avenue is to examine the association between audit committee member tenure and busy-boarding with other measures of audit quality and financial reporting quality, particularly in the post-SOX period. Another interesting area is to examine the reaction of external and internal auditors when audit committee members have long tenure and/or multiple board memberships. Finally, it is also interesting to examine how audit committee member interactions and processes vary with the tenure and busy-boarding of audit committee members.

CHAPTER VI: SUMMARY AND CONCLUSIONS

The Sarbanes-Oxley Act of 2002 as well as the Statement on Auditing Standards No. 99: Consideration of Fraud in a Financial Statement Audit, have specific requirements related to the composition of audit committees, the interaction between audit committees and external auditors, and auditors' attitudes and procedures concerning risk assessment. Prior studies have focused more on the financial expertise and independence of audit committees but there is not as much research related to audit committee compensation, tenure and busyness. In addition, I contribute to extant audit fee literature and study auditors' behavior concerning risk assessment. Hence, I test the associations between various measures of meeting or beating analyst forecasts (my proxy for client risk and earnings management) and audit fees, audit committee compensation, and audit committee tenure and busyness.

Audit Fees and Repeatedly Meeting-Beating or Missing Analyst Forecasts

In Chapter III, I extend extant audit fee literature by providing evidence on auditors' risk assessment of clients that frequently meet or just beat, or frequently just miss, analyst forecasts. In conducting regression analysis on 1,588 non-financial, domestic firms having a fiscal year end of December 31, 2007, I find that the frequency of meeting or just beating (just missing) analyst forecasts is negatively (positively) associated with audit fees. These results suggest auditors view firms that frequently meet or just beat (just miss) analyst forecasts as being inherently less (more) risky.

The first limitation of this study is the lack of theory, or empirically derived evidence, supporting the use of frequently meeting or just beating, or just missing, forecasts as a proxy for client risk. Extant research studying the association between

audit fees and business risk have used various proxies for client risk, such as confidential or proprietary measures (Bell et al. 2001; Bedard and Johnstone 2004; Charles et al. 2010), discretionary accruals (Abbott et al. 2006), restatements (Feldmann et al. 2009), initial public offerings (Venkataraman et al. 2008), and internal control weaknesses (Munsif et al. 2011). To date, I am unaware of any literature employing the frequency of meeting-just beating or just missing analyst forecasts as a proxy for client risk. A second potential limitation is the use of only one measure of forecast error in the study. Combining conservatism and theories concerning forecast recency (Sinha et al. 1997), I use the single most recent estimate as the analyst forecast measure from which I calculate the forecast error. However, the degree to which analyst forecasts have been measured in extant literature (e.g. use of the mean, median or mode of all forecasts made during a specific window as opposed to the single most recent forecast), is the degree to which forecast errors can be measured.

Audit Committee Compensation and Meeting-Beating Analyst Forecasts

In Chapter IV, I contribute to the limited literature on audit committee compensation and financial reporting quality by examining the association between equity and cash compensation in audit committee director pay, and the magnitude with which actual earnings exceed analyst forecasts. By so doing, I also inform policy-makers such as the NACD and industry compensation experts. Specifically, I evaluate the association between compensation structure (proportion of stocks and options (equity), proportion of cash, and the proportion of cash to equity) of the audit committee and (1) whether firms are more likely to meet or just beat analysts' earnings forecasts, and (2) the magnitude with which actual earnings exceed analysts' earnings forecasts.

Using logistic regression on a sample of 1,011 firms, I find evidence suggesting a significant association between audit committee compensation and the likelihood of meeting or beating analysts' forecasts. Specifically, I find that neither cash nor option/ equity-based compensation is significantly associated with the likelihood of meeting or just beating analysts' earnings forecasts. However, I observe that greater equity in the compensation structure is positively associated with the likelihood of actual earnings beating forecasted earnings by a greater margin ($0.04 and $0.05). Conversely, greater cash compensation in the pay structure of independent directors on the audit committee is inversely related to the likelihood of actual earnings exceeding forecasts by a large margin. These findings suggest that compensation plans comprised predominantly of cash, as opposed to stock and stock options, are "best" at preserving objectivity in financial reporting oversight tasks performed by the audit committee. I posit that since cash-based compensation is not tied to the financial performance of the firm it is, therefore, less likely to incentivize directors to align their interests with those of managers. In contrast, the effect of stock and stock option-based compensation suggest independent directors on the audit committee may be motivated to focus on firm performance to the detriment of reporting quality because such compensation is either directly or indirectly linked to firm performance.

A limitation of this study, as with most studies pertaining to corporate governance, is the threat of endogeneity. Although I make a case for using meeting-just beating as a proxy for earnings management, the present study does not include additional analyses seeking to confirm that meeting-beating is a function of equity-based compensation, as opposed to equity compensation being a function of a firm's ability to exceed earnings to

a greater extent. One way to mitigate the threat of endogeneity is to perform additional regression analysis replacing the current dependent variable with a different empirically derived measure of earnings management (i.e. discretionary accruals) and determine if results associated with the test variables remain unchanged.

Audit Committee Characteristics and Repeatedly Meeting or Beating Analyst Forecasts

In Chapter V, I examine the propensity of 3,157 firms to meet-or-just-beat or just miss analyst forecasts by $0.01 or less during 2005 to 2007. I find that firms are much more likely to repeatedly meet-or-just-beat analyst forecasts than to repeatedly just miss analyst forecasts. In addition, using logistic regression on a sample size of 139 firms, I find that audit committee director tenure and busyness are positively associated with the likelihood of a firm repeatedly meeting-or-just-beating analyst forecasts. These results are consistent with suggestions from governance advocates about the benefits related to restricting audit committee member tenure (e.g., Lapides et al. 2007; Deloitte 2010) and service on multiple boards (NACD 1996; CII 1998; U.S. Senate 2002b).

A limitation of this essay is the potentially low statistical power associated with the small sample size used for the regression analysis. Data concerning audit committee tenure and number of simultaneous participating on other outside boards was hand-collected from proxy statements, thus restricting the sample size. In addition, and as mentioned as a limitation of essay one, additional support is needed for the use of *repeatedly* meeting-or-just beating analysts' forecasts as a proxy for poor financial reporting quality in light.

TABLE 1: Industry Membership

Industry	Number	Percent
Mining and Construction	139	8.753%
Manufacturing	792	49.874%
Transportation	235	14.798%
Wholesale and Retail	118	7.431%
Services	303	19.081%
Other	1	0.063%
Total	**1,588**	**100%**

TABLE 2: Descriptive Statistics

n = 1,588

Variable	Mean	Std Dev	Q1	Median	Q3
Audit Fees (in $000s)	2,378	3,744	611	1,184	2,469
Total Assets (in $millions)	4,398	15,169	181	655	2,677
LN_AUDFEES	14.034	1.107	13.323	13.984	14.719
LN_TA	6.598	1.887	5.198	6.484	7.893
RECINV	0.211	0.167	0.072	0.183	0.310
SQRTSEG	1.278	0.631	1.000	1.000	1.732
FOROPS	0.570	0.495	0.000	1.000	1.000
LIQ	2.926	3.470	1.272	1.927	3.336
LOSS	0.270	0.443	0.000	0.000	1.000
ROA	-0.016	0.328	-0.008	0.041	0.083
BM	0.448	0.376	0.231	0.388	0.605
ICW	0.080	0.267	0.000	0.000	0.000
GC	0.020	0.125	0.000	0.000	0.000
BIG4	0.820	0.380	1.000	1.000	1.000
AUDINIT	0.050	0.214	0.000	0.000	0.000
NUM_MB	2.150	2.092	1.000	2.000	3.000
NUM_MISS	0.640	0.878	0.000	0.000	1.000

TABLE 3: Pearson Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) LN_AUDFEES	1														
(2) LN_TA	**0.827**	1													
(3) RECINV	**0.069**	**-0.081**	1												
(4) SQRTSEG	**0.171**	**0.165**	**0.117**	1											
(5) FOROPS	**0.366**	**0.222**	**0.281**	0.041	1										
(6) LIQ	**-0.314**	**-0.344**	**-0.105**	**-0.104**	**-0.074**	1									
(7) LOSS	**-0.269**	**-0.385**	**-0.180**	**-0.130**	**-0.135**	**0.200**	1								
(8) ROA	**0.223**	**0.339**	**0.183**	**0.080**	**0.153**	**-0.075**	**-0.479**	1							
(9) BM	0.010	**0.068**	**0.142**	**0.076**	0.000	-0.011	0.001	**0.063**	1						
(10) ICW	0.000	**-0.106**	**0.050**	-0.043	**0.054**	0.001	**0.145**	-0.028	0.026	1					
(11) GC	**-0.109**	**-0.176**	-0.012	-0.008	-0.035	-0.040	**0.198**	**-0.413**	**-0.061**	**0.115**	1				
(12) BIG4	**0.451**	**0.429**	**-0.080**	**0.056**	**0.097**	**-0.123**	**-0.130**	**0.106**	-0.027	**-0.059**	**-0.115**	1			
(13) AUDINIT	**-0.083**	**-0.105**	0.020	-0.047	-0.028	**0.052**	**0.078**	**-0.079**	0.046	**0.067**	0.043	**-0.122**	1		
(14) NUM_MB	**0.051**	**0.059**	0.031	-0.007	**0.093**	**-0.051**	**-0.170**	**0.109**	-0.043	**-0.060**	**-0.079**	**0.083**	0.021	1	
(15) NUM_MISS	-0.004	-0.037	0.011	0.031	0.000	0.025	-0.040	0.015	**-0.059**	-0.043	-0.046	0.008	**-0.049**	**0.202**	1

TABLE 4: Regression Results

Model: $LN\_AUDFEES = \beta_0 + \beta_1*LN\_TA + \beta_2*RECINV + \beta_3*SQRTSEG + \beta_4*FOROPS + \beta_5*LIQ + \beta_6*LOSS + \beta_7*ROA + \beta_8*BM + \beta_9*ICW + \beta_{10}*GC + \beta_{11}*BIG4 + \beta_{12}*AUDINIT + \beta_{13}*NUM\_MB + \beta_{14}*NUM\_MISS + \beta_{15\text{-}23} * (Industry\ Dummy\ Variables) + \varepsilon$

Variable	Predicted sign	Coefficient	p-value*
Intercept		10.123	0.000
LN_TA	+	0.496	0.000
RECINV	+	0.853	0.000
SQRTSEG	+	0.035	0.059
FOROPS	+	0.253	0.000
LIQ	-	-0.014	0.001
LOSS	+	0.110	0.002
ROA	-	-0.264	0.000
BM	-	-0.143	0.000
ICW	+	0.300	0.000
GC	+	-0.054	0.326
BIG4	+	0.308	0.000
AUDINIT	+/-	0.054	0.398
NUM_MB	+/-	-0.014	0.044
NUM_MISS	+/-	0.028	0.076
Industry Variables		Yes	
n = 1,588	Adj. R^2 = 0.772	F-stat = 234.243	0.000

* P-values are one-tailed, with the exception of the intercept, AUDITINIT, NUM_MB, and NUM_MISS.

TABLE 5: Sensitivity Analysis Regression Results

"Larger" Firms Only
("Larger" defined as firms having total assets equal to
or greater than the median value of LN_TA)

Model: $LN\_AUDFEES = \beta_0 + \beta_1*LN\_TA + \beta_2*RECINV + \beta_3*SQRTSEG + \beta_4*FOROPS + \beta_5*LIQ + \beta_6*LOSS + \beta_7*ROA + \beta_8*BM + \beta_9*ICW + \beta_{10}*GC + \beta_{11}*BIG4 + \beta_{12}*AUDINIT + \beta_{13}*NUM\_MB + \beta_{14}*NUM\_MISS + \beta_{15\text{-}23} * (Industry\ Dummy\ Variables) + \varepsilon$

Variable	Predicted sign	Coefficient	p-value*
Intercept		9.677	0.000
LN_TA	+	0.564	0.000
RECINV	+	1.241	0.000
SQRTSEG	+	0.011	0.330
FOROPS	+	0.309	0.000
LIQ	-	-0.039	0.002
LOSS	+	0.088	0.102
ROA	-	-0.030	0.461
BM	-	-0.146	0.003
ICW	+	0.438	0.000
GC	+	0.304	0.153
BIG4	+	0.078	0.229
AUDINIT	+/-	0.140	0.100
NUM_MB	+/-	-0.016	0.086
NUM_MISS	+/-	0.002	0.94
Industry Variables		Yes	
n = 794	Adj. R^2 = 0.700	F = 81.273	0.000

* P-values are one-tailed, with the exception of the intercept, AUDITINIT, NUM_MB, and NUM_MISS.

TABLE 6: Sensitivity Analysis Regression Results

"Smaller" Firms Only

("Smaller" is defined as firms having total assets less than the median value of LN_TA)

Model: $LN\_AUDFEES = \beta_0 + \beta_1*LN\_TA + \beta_2*RECINV + \beta_3*SQRTSEG + \beta_4*FOROPS + \beta_5*LIQ + \beta_6*LOSS + \beta_7*ROA + \beta_8*BM + \beta_9*ICW + \beta_{10}*GC + \beta_{11}*BIG4 + \beta_{12}*AUDINIT + \beta_{13}*NUM\_MB + \beta_{14}*NUM\_MISS + \beta_{15\text{-}23} * (Industry\ Dummy\ Variables) + \varepsilon$

Variable	Predicted sign	Coefficient	p-value
Intercept		10.459	0.000
LN_TA	+	0.445	0.000
RECINV	+	0.585	0.000
SQRTSEG	+	0.083	0.025
FOROPS	+	0.207	0.000
LIQ	-	-0.017	0.000
LOSS	+	0.096	0.027
ROA	-	-0.210	0.000
BM	-	-0.097	0.037
ICW	+	0.257	0.000
GC	+	-0.113	0.197
BIG4	+	0.384	0.000
AUDINIT	+/-	-0.009	0.910
NUM_MB	+/-	-0.012	0.230
NUM_MISS	+/-	0.047	0.030
Industry Variables		Yes	
n = 794	Adj. R^2 = 0.520	F = 38.330	0.000

* P-values are one-tailed, with the exception of the intercept, AUDITINIT, NUM_MB, and NUM_MISS.

TABLE 7: **Sensitivity Analysis Regression Results**

Big4 Firms Only

Model: $LN\_AUDFEES = \beta_0 + \beta_1*LN\_TA + \beta_2*RECINV + \beta_3*SQRTSEG + \beta_4*FOROPS + \beta_5*LIQ + \beta_6*LOSS + \beta_7*ROA + \beta_8*BM + \beta_9*ICW + \beta_{10}*GC + \beta_{11}*AUDINIT + \beta_{12}*NUM\_MB + \beta_{13}*NUM\_MISS + \beta_{14\text{-}22} * (Industry\ Dummy\ Variables) + \varepsilon$

Variable	Predicted sign	Coefficient	p-value
Intercept		10.463	0.000
LN_TA	+	0.493	0.000
RECINV	+	0.916	0.000
SQRTSEG	+	0.014	0.265
FOROPS	+	0.242	0.000
LIQ	-	-0.016	0.001
LOSS	+	0.069	0.054
ROA	-	-0.297	0.000
BM	-	-0.144	0.000
ICW	+	0.353	0.000
GC	+	0.058	0.359
AUDINIT	+/-	0.101	0.176
NUM_MB	+/-	-0.013	0.058
NUM_MISS	+/-	0.011	0.488
Industry Variables		Yes	
n = 1,310	Adj. R^2 = 0.758	F = 187.625	0.000

* P-values are one-tailed, with the exception of the intercept, AUDITINIT, NUM_MB, and NUM_MISS.

TABLE 8: Industry Membership

Panel A - Industry Membership of Sample

Industry	Number	Percent
Mining and Construction	77	7.62%
Manufacturing	370	36.60%
Transportation	121	11.97%
Wholesale and Retail	64	6.33%
Finance and Insurance	229	22.65%
Services	150	14.83%
Total	**1,011**	**100%**

Panel B - Frequency of Forecast Errors

	n	**%**
Forecast Error < $0.00	327	32.34%
Forecast Error = $0.00	104	10.29%
Forecast Error = $0.01	91	9.00%
Forecast Error = $0.02	94	9.30%
Forecast Error = $0.03	62	6.13%
Forecast Error = $0.04	43	4.25%
Forecast Error = $0.05	43	4.25%
Forecast Error = $0.06	25	2.47%
Forecast Error = $0.07	34	3.36%
Forecast Error = $0.08	20	1.98%
Forecast Error = $0.09	14	1.38%
Forecast Error = $0.10	20	1.98%
Forecast Error = $0.11	15	1.48%
Forecast Error = $0.12	9	0.89%
Forecast Error = $0.13	10	0.99%
Forecast Error = $0.14	8	0.79%
Forecast Error = $0.15	5	0.49%

TABLE 9: Descriptive Statistics and Univariate Results

	All Firms (n = 1,011)					Firms with FE less than the sample's median FE of $0.01 (n = 431)					Firms with FE equal to or larger than the sample's median FE of $0.01 (n = 580)					*p*-value from tests of differences
	Mean	SD	Q1	Med	Q3	Mean	SD	Q1	Med	Q3	Mean	SD	Q1	Med	Q3	
LN_TA	8.117	1.694	6.930	8.023	9.196	8.084	1.831	6.734	7.982	9.219	8.142	1.585	7.038	8.036	9.170	0.596
LEV	0.579	0.221	0.435	0.582	0.730	0.603	0.230	0.462	0.604	0.778	0.561	0.214	0.424	0.571	0.704	0.003
ROA	0.053	0.075	0.021	0.050	0.087	0.043	0.084	0.012	0.040	0.086	0.060	0.066	0.030	0.054	0.088	0.001
MKTBOOK	3.258	3.911	1.490	2.242	3.518	3.157	3.766	1.390	2.246	3.627	3.333	4.016	1.561	2.231	3.496	0.474
LITRISK	0.180	0.381	0.000	0.000	0.000	0.170	0.373	0.000	0.000	0.000	0.180	0.387	0.000	0.000	0.000	0.517
BIG4	0.940	0.231	1.000	1.000	1.000	0.920	0.266	1.000	1.000	1.000	0.960	0.199	1.000	1.000	1.000	0.016
INSIDEOWN	0.092	0.144	0.017	0.040	0.095	0.107	0.159	0.023	0.050	0.116	0.080	0.131	0.015	0.035	0.080	0.004
CEO_EQ	0.202	0.185	0.015	0.175	0.329	0.192	0.180	0.000	0.169	0.316	0.209	0.189	0.028	0.178	0.341	0.149
ACIND	0.870	0.335	1.000	1.000	1.000	0.860	0.347	1.000	1.000	1.000	0.880	0.326	1.000	1.000	1.000	0.384
ACEXPERT	0.970	0.178	1.000	1.000	1.000	0.980	0.151	1.000	1.000	1.000	0.960	0.195	1.000	1.000	1.000	0.145
AC_EQUITY	0.510	0.219	0.381	0.529	0.655	0.489	0.226	0.362	0.515	0.644	0.525	0.213	0.395	0.541	0.666	0.010
AC_CASH	0.435	0.209	0.291	0.418	0.553	0.457	0.223	0.310	0.434	0.568	0.419	0.197	0.281	0.409	0.533	0.005
CASHTOEQ	0.994	0.218	0.870	0.959	1.069	1.017	0.238	0.877	0.968	1.089	0.976	0.200	0.866	0.951	1.053	0.004

TABLE 10: Pearson Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) MB	1																
(2) BIGBEAT	**-0.473**	1															
(3) BIGBEAT_04	**-0.343**	**0.724**	1														
(4) BIGBEAT_05	**-0.310**	**0.655**	**0.905**	1													
(5) LN_TA	-0.029	0.039	0.042	0.051	1												
(6) LEV	-0.017	**-0.070**	-0.054	-0.024	**0.492**	1											
(7) ROA	0.042	**0.085**	0.035	0.036	**-0.068**	**-0.276**	1										
(8) MKTBOOK	0.043	-0.019	**-0.070**	-0.061	**-0.067**	**0.114**	**0.298**	1									
(9) LITRISK	**0.083**	-0.016	-0.042	-0.058	**-0.212**	**-0.252**	0.003	**0.072**	1								
(10) BIG4	-0.054	**0.082**	0.053	0.032	**0.247**	**0.074**	0.056	0.017	-0.056	1							
(11) INSIDEOWN	-0.013	**-0.074**	**-0.075**	-0.061	**-0.210**	**-0.144**	0.050	**0.066**	0.032	**-0.089**	1						
(12) CEO_EQ	-0.060	**0.084**	**0.075**	0.063	**0.272**	**0.142**	-0.003	0.005	**-0.151**	**0.117**	**-0.151**	1					
(13) ACIND	0.031	0.029	0.024	0.021	**-0.073**	-0.009	-0.001	0.010	0.046	-0.043	-0.030	0.027	1				
(14) ACEXPERT	-0.009	-0.045	**-0.061**	-0.056	0.048	0.022	-0.004	0.030	0.026	-0.021	-0.022	-0.009	-0.004	1			
(15) AC_EQUITY	0.034	0.062	**0.070**	**0.060**	-0.051	**-0.183**	**0.084**	**0.147**	**0.200**	**0.087**	**-0.078**	**0.103**	**0.063**	0.046	1		
(16) AC_CASH	-0.021	**-0.078**	**-0.083**	**-0.082**	-0.024	**0.155**	**-0.101**	**-0.140**	**-0.148**	**-0.095**	**0.075**	**-0.128**	-0.042	-0.062	**-0.852**	1	
(17) CASHTOEQ	-0.029	**-0.073**	**-0.082**	**-0.071**	0.022	**0.169**	**-0.078**	**-0.133**	**-0.165**	**-0.099**	**0.082**	**-0.137**	-0.048	-0.062	**-0.941**	**0.917**	1

Numbers in bold indicate significance levels of 5% or less.

TABLE 11: Logistic Regression Results

Model: $MB = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric:\ AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-1.320	0.002	-1.055	0.064	-0.807	0.385
LN_TA	+/-	0.014	0.958	0.012	0.969	0.013	0.963
LEV	+/-	0.231	0.820	0.216	0.844	0.237	0.810
ROA	+/-	1.822	0.029	1.812	0.032	1.828	0.028
MKTBOOK	+	0.006	0.474	0.006	0.465	0.006	0.473
LITRISK	+	0.474	0.003	0.484	0.002	0.480	0.003
BIG4	+/-	-0.551	0.005	-0.539	0.007	-0.553	0.005
INSIDEOWN	+/-	-0.835	0.087	-0.857	0.071	-0.834	0.087
CEO_EQ	+	-0.758	0.008	-0.748	0.011	-0.772	0.007
ACIND	-	0.191	0.293	0.196	0.282	0.193	0.290
ACEXPERT	-	-0.135	0.463	-0.132	0.465	-0.143	0.459
AC_EQUITY	**+**	**0.323**	**0.258**				
AC_CASH	**-**			**-0.231**	**0.380**		
CASHTOEQ	**-**					**-0.337**	**0.242**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
MB = 0		816		816		816	
MB = 1		195		195		195	
Pseudo R^2 / *p*-val		5%	0.193	4%	0.207	4%	0.191

TABLE 12: Logistic Regression Results

Model: $BIGBEAT = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric: AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-0.548	0.437	-0.080	0.988	0.122	0.977
LN_TA	+/-	0.062	0.101	0.056	0.185	0.060	0.121
LEV	+/-	-0.838	0.000	-0.806	0.001	-0.818	0.000
ROA	+/-	1.867	0.001	1.854	0.001	1.878	0.001
MKTBOOK	+	-0.013	0.334	-0.014	0.303	-0.013	0.319
LITRISK	+	-0.141	0.362	-0.136	0.370	-0.137	0.369
BIG4	+/-	0.544	0.002	0.541	0.002	0.536	0.003
INSIDEOWN	+/-	-0.636	0.097	-0.640	0.092	-0.630	0.103
CEO_EQ	+	0.659	0.001	0.632	0.003	0.631	0.003
ACIND	-	0.176	0.206	0.178	0.200	0.178	0.201
ACEXPERT	-	-0.590	0.007	-0.602	0.005	-0.603	0.005
AC_EQUITY	**+**	**0.370**	**0.089**				
AC_CASH	**-**			**-0.522**	**0.007**		
CASHTOEQ	**-**					**-0.457**	**0.021**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
BIGBEAT = 0		522		522		522	
BIGBEAT = 1		489		489		489	
Pseudo R^2 / *p*-val		5%	0.003	6%	0.002	6%	0.003

TABLE 13: Logistic Regression Results

Model: $BIGBEAT\_04 = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric:\ AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-0.655	0.308	0.148	0.962	0.595	0.541
LN_TA	+/-	0.055	0.258	0.046	0.436	0.052	0.306
LEV	+/-	-0.736	0.003	-0.708	0.006	-0.707	0.006
ROA	+/-	0.907	0.507	0.869	0.542	0.918	0.497
MKTBOOK	+	-0.051	0.001	-0.052	0.000	-0.052	0.000
LITRISK	+	-0.146	0.375	-0.133	0.396	-0.137	0.389
BIG4	+/-	0.308	0.410	0.312	0.400	0.297	0.447
INSIDEOWN	+/-	-0.815	0.037	-0.844	0.025	-0.816	0.036
CEO_EQ	+	0.485	0.066	0.457	0.091	0.440	0.109
ACIND	-	0.147	0.313	0.154	0.294	0.152	0.301
ACEXPERT	-	-0.761	0.000	-0.775	0.000	-0.783	0.000
AC_EQUITY	**+**	**0.715**	**0.000**				
AC_CASH	**-**			**-0.855**	**0.000**		
CASHTOEQ	**-**					**-0.850**	**0.000**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
BIGBEAT_04 = 0		678		678		678	
BIGBEAT_04 = 1		333		333		333	
Pseudo R^2 / *p*-value		6%	0.003	6%	0.002	6%	0.002

TABLE 14: Logistic Regression Results

Model: $BIGBEAT\_05 = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric:\ AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-0.763	0.183	0.097	0.984	0.492	0.689
LN_TA	+/-	0.051	0.358	0.041	0.563	0.048	0.410
LEV	+/-	-0.418	0.366	-0.371	0.482	-0.386	0.444
ROA	+/-	1.331	0.192	1.299	0.213	1.346	0.182
MKTBOOK	+	-0.051	0.000	-0.053	0.000	-0.052	0.000
LITRISK	+	-0.110	0.436	-0.099	0.448	-0.100	0.446
BIG4	+/-	0.079	0.957	0.077	0.959	0.066	0.971
INSIDEOWN	+/-	-0.561	0.351	-0.584	0.314	-0.563	0.347
CEO_EQ	+	0.330	0.255	0.287	0.311	0.283	0.317
ACIND	-	0.142	0.336	0.147	0.326	0.146	0.327
ACEXPERT	-	-0.730	0.000	-0.751	0.000	-0.752	0.000
AC_EQUITY	**+**	**0.712**	**0.000**				
AC_CASH	**-**			**-0.946**	**0.000**		
CASHTOEQ	**-**					**-0.855**	**0.000**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
BIGBEAT_05 = 0		721		721		721	
BIGBEAT_05 = 1		290		290		290	
Pseudo R^2 / *p*-value		5%	0.019	5%	0.010	5%	0.012

TABLE 15: Sensitivity Analysis - Logistic Regression Results

Model: $BIGBEAT\_03 = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric: AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-0.505	0.529	0.115	0.976	0.447	0.715
LN_TA	+/-	0.026	0.793	0.019	0.885	0.024	0.820
LEV	+/-	-0.636	0.017	-0.626	0.021	-0.626	0.021
ROA	+/-	1.991	0.001	1.960	0.001	1.996	0.001
MKTBOOK	+	-0.043	0.000	-0.043	0.000	-0.043	0.000
LITRISK	+	-0.111	0.420	-0.098	0.438	-0.101	0.435
BIG4	+/-	0.508	0.019	0.515	0.015	0.504	0.020
INSIDEOWN	+/-	-0.931	0.003	-0.959	0.001	-0.938	0.002
CEO_EQ	+	0.457	0.077	0.448	0.087	0.434	0.102
ACIND	-	0.177	0.220	0.185	0.199	0.183	0.205
ACEXPERT	-	-0.687	0.000	-0.693	0.000	-0.699	0.000
AC_EQUITY	**+**	**0.606**	**0.000**				
AC_CASH	**-**			**-0.629**	**0.001**		
CASHTOEQUITY	**-**					**-0.627**	**0.000**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
BIGBEAT_03 = 0		616		616		616	
BIGBEAT_03 = 1		395		395		279	
Pseudo R^2 / *p*-value		6%	0.001	6%	0.001	6%	0.001

TABLE 16: Sensitivity Analysis - Logistic Regression Results

Model: $BIGBEAT\_06 = \beta_0 + \beta_1 * LN\_TA + \beta_2 * LEV + \beta_3 * ROA + \beta_4 * MKTBOOK + \beta_5 * LITRISK + \beta_6 * BIG4 + \beta_7 * INSIDEOWN + \beta_8 * CEO\_EQ + \beta_9 * ACIND + \beta_{10} * ACEXPERT + \beta_{11} * (audit\ committee\ compensation\ metric: AC\_EQUITY\ or\ AC\_CASH\ or\ CASHTOEQ) + \beta_{12\text{-}20} * (INDUSTRY) + \varepsilon$

Variable	Predicted Sign	Estimate	*p*-value	Estimate	*p*-value	Estimate	*p*-value
Intercept		-1.132	0.008	-0.111	0.982	0.280	0.907
LN_TA	+/-	0.059	0.257	0.047	0.490	0.056	0.308
LEV	+/-	-0.200	0.853	-0.127	0.941	-0.161	0.904
ROA	+/-	1.011	0.495	0.981	0.520	1.027	0.482
MKTBOOK	+	-0.061	0.000	-0.064	0.000	-0.062	0.000
LITRISK	+	-0.107	0.446	-0.096	0.456	-0.097	0.455
BIG4	+/-	0.199	0.776	0.190	0.795	0.183	0.811
INSIDEOWN	+/-	-0.297	0.809	-0.322	0.777	-0.301	0.803
CEO_EQ	+	0.293	0.319	0.228	0.389	0.238	0.379
ACIND	-	0.031	0.492	0.035	0.491	0.036	0.490
ACEXPERT	-	-0.835	0.000	-0.866	0.000	-0.861	0.000
AC_EQUITY	**+**	**0.792**	**0.000**				
AC_CASH	**-**			**-1.158**	**0.000**		
CASHTOEQUITY	**-**					**-0.965**	**0.000**
INDUSTRY		Yes		Yes		Yes	
Observations		1,011		1,011		1,011	
BIGBEAT_06 = 0		764		764		764	
BIGBEAT_06 = 1		247		247		247	
Pseudo R^2 / *p*-value		5%	0.035	5%	0.012	5%	0.022

TABLE 17: Sample Selection

	Number of firm quarters
Total number of firm-quarter observations in I/B/E/S	3,521
Less: Foreign observations	(316)
Less: Missing financial, proxy, or analyst data	(45)
Less: Observations that switched to a non-12/31 fiscal year end	(2)
Less: Outlier	(1)
Sample Size	**3,157**

TABLE 18: Number of Quarters of Meet/Just Beat or Just Miss Analyst Forecasts

This table presents the frequency of meeting or just beating analyst forecasts, or just missing analyst forecasts, during the 12 quarters ending December 31, 2007.

		MEET OR JUST BEAT												
		0	1	2	3	4	5	6	7	8	9	10	11	Total
JUST MISS	0	727	492	282	162	95	54	23	15	20	4	4	2	1,880
	1	176	208	159	122	73	52	18	16	9	9	5	3	850
	2	34	64	54	36	37	25	22	11	2	6	-	-	291
	3	12	18	10	17	14	16	5	8	1	1	-	-	102
	4	3	1	3	7	4	1	3	-	1	-	-	-	23
	5	1	2	1	2	2	1	-	-	-	-	-	-	9
	6	-	-	1	-	1	-	-	-	-	-	-	-	2
	Total	953	785	510	346	226	149	71	50	33	20	9	5	**3,157**

TABLE 19: Univariate Tests of Differences

Variable	Repeated Meet/Just Beat Firms (n = 75) Mean	Median	Std. Dev.	Repeated Just Miss Firms (n = 64) Mean	Median	Std. Dev.	*p*-value from tests of differences
HORIZON	31.730	20.000	30.458	45.730	26.000	41.066	0.051
FORSTD	0.020	0.011	0.028	0.083	0.030	0.250	0.000
NUMANALY	7.910	6.000	4.902	6.940	5.000	5.188	0.146
LEV	0.520	0.480	0.277	0.608	0.627	0.282	0.044
LITRISK	0.390	0.000	0.490	0.190	0.000	0.393	0.015
MKTBOOK	3.249	2.797	2.645	4.340	2.041	6.716	0.174
LOGMKTVAL	3.181	2.968	0.745	2.889	2.723	0.767	0.015
LOSS	0.070	0.000	0.251	0.220	0.000	0.417	0.013
BIG4	0.850	1.000	0.356	0.830	1.000	0.380	0.816
ACSIZE	1.901	1.732	0.200	1.923	1.732	0.234	0.756
ACXPRT	1.268	1.000	0.375	1.284	1.000	0.408	0.784
ACMEET	2.775	2.828	0.492	2.801	2.828	0.601	0.774
ACTENURE	0.298	0.250	0.287	0.174	0.000	0.240	0.006
ACBUSY	0.078	0.000	0.145	0.056	0.000	0.137	0.243

This table presents univariate tests of difference between 75 firms that repeatedly meet or just beat analyst forecasts and 64 firms that repeatedly just missed meeting analyst forecasts. The sample sizes differ from those depicted in the top-right and bottom-left corners of Table 2 due to missing data for variables in the regression model. The variables are defined as follows: HORIZON = Forecast horizon, equal to the number of days between earnings announcement and the day the most recent earnings forecast was made; FORSTD = Forecast dispersion, calculated as the standard deviation of earnings forecasts during the 4th quarter of 2007; NUMANALY = Number of analysts making an earnings forecast; LEV = Leverage, equal to total liabilities divided by total assets; LITRISK = Indicator variable if firm's SIC code is 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7370, 0 otherwise; MTOB = Market to book ratio, calculated as stock price at fiscal year-end divided by book value per share; LOGMKTVAL = Logged market value of equity; LOSS = Indicator variable equal to 1 if the firm had a net loss for fiscal year 2007, 0 otherwise; BIG4 = 1 if auditor is a Big 4 firm, 0 otherwise; ACSIZE = Square root of the number of audit committee members during 2007; ACXPRT = Square root of the number of audit committee financial experts during 2007; ACMEET = Square root of the number of audit committee meetings during 2007; ACTENURE = Ratio of audit committee members having consecutive tenure on the committee greater than 7 years; ACBUSY = Ratio of members on the committee who hold more than three other outside directorships.

TABLE 20: Regression Results

Model: $MB = \beta_0 + \beta_1*HORIZON + \beta_2*FORSTD + \beta_3*NUMANALY + \beta_4*LEV + \beta_5*LITRISK + \beta_6*MTOB + \beta_7*LOGMKTVAL + \beta_8*LOSS + \beta_9*BIG4 + \beta_{10}*ACSIZE + \beta_{11}*ACXPRT + \beta_{12}*ACMEET + \beta_{13}*ACTENURE + \beta_{14}*ACBUSY + \varepsilon$

Variable	Predicted sign	Coefficient	*p*-value
Intercept		5.618	0.030
HORIZON	-	-0.016	0.027
FORSTD	-	-25.108	0.002
NUMANALY	+	0.000	0.498
LEV	+	0.522	0.288
LITRISK	+	2.539	0.001
MKTBOOK	-	-0.212	0.002
LOGMKTVAL	+	1.451	0.005
LOSS	-	-1.198	0.070
BIG4	-	-0.947	0.085
ACSIZE	-	-2.083	0.047
ACXPRT	-	-0.973	0.093
ACMEET	-	-1.210	0.009
ACTENURE	?	2.476	0.009
ACBUSY	?	4.108	0.018

Model Chi-square = 65.511, $p < .001$; Nagelkerke $R^2 = .502$.

Note: This table presents the results from a logistic regression with MBMISS as the dependent variable. MB = 1 if firm repeatedly met or just beat analysts' forecast by one cent per share or less (i.e., \$0.00 ≤ forecast error ≤ \$0.01), and 0 otherwise. The sample includes 75 firms that repeatedly meet-or-just-beat analyst forecasts and 64 firms that repeatedly just missed meeting analyst forecasts. Other variables are defined as in Table 3.4.

REFERENCES

Abbott, L. J., Y. Park, and S. Parker. 2000. The effects of audit committee activity and independence on corporate fraud. *Managerial Finance* 26 (11): 55 - 67.

_____, S. Parker, G. F. Peters, and K. Raghunandan. 2003. The association between audit committee characteristics and audit fees. *Auditing: A Journal of Theory & Practice* 22 (2): 17-32.

_____, _____, and G. F. Peters. 2004. Audit committee characteristics and restatements. Auditing: *A Journal of Practice & Theory* 23 (1): 69-87.

_____, _____, and _____. 2006. Earnings management, litigation risk, and asymmetric audit fee responses. *Auditing: A Journal of Practice & Theory* 25 (1): 85-98.

Agrawal, A., and S. Chadha. 2005. Corporate governance and accounting scandals. *Journal of Law and Economics* 48 (2): 371–406.

American Institute of Certified Public Accountants (AICPA). 2007. *Audit Risk and Materiality in Conducting an Audit*. AU Section 312. New York, NY: AICPA.

Archambeault, D. S., F. T. DeZoort, D. R. Hermanson. 2008. Audit committee incentive compensation and accounting restatements. *Contemporary Accounting Research* 25 (4): 965-92.

Atiase, R. 1985. Predisclosure information, firm capitalization and security price behavior around earnings announcements. *Journal of Accounting Research* 23 (1): 21-36.

Ball, R. 2009. Market and political/regulatory perspectives on the recent accounting scandals. *Journal of Accounting Research* 47 (2): 277-323.

Barber, B., Odean, T., 2008. All that glitters: the effect of attention and news on the buying behavior of individual and institutional investors. *Review of Financial Studies* 21: 785–818.

Barrier, M. 2002. The compensation balance. *Internal Auditor* 59 (3): 42–7.

Barth, M., J. Elliott, and M. Finn. 1999. Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research* 37 (2): 387-414.

Bartov, E., D. Givoly, and C. Hayn. 2002. The rewards to meeting or beating earnings expectations. *Journal of Accounting & Economics* 33 (2): 173-204.

_____, and D. Cohen. 2008. Mechanisms to meet/beat analyst earnings expectations in the pre- and post-Sarbanes-Oxley eras. Working Paper, New York University.

Barua, A., J. Legoria, and J. Moffitt. 2006. Accruals management to achieve earnings benchmarks: A comparison of pre-managed profit and loss firms. *Journal of Business Finance & Accounting* 33 (5) & (6): 653-70.

_____, D. Rama, and V. Sharma. 2010. Audit committee characteristics and investment in internal auditing. *Journal of Accounting and Public Policy* 29: 501-13.

Bauman, M., and K. Shaw. 2006. Stock option compensation and the likelihood of meeting analysts' quarterly earnings targets. *Review of Quantitative Finance and Accounting* 26: 301-19.

Beasley, M. S., 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review* 71: 443–65.

_____, J. V. Carcello, D. R. Hermanson, and P. D. Lapides. 2000. Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons* 14 (4): 441-54.

_____, J. V. Carcello, D. R. Hermanson, and T. L. Neal. 2009. The audit committee oversight process. *Contemporary Accounting Research* 26 (1): 65-122.

Bedard, J. C., S. M. Chtourou, and L. Courteau. 2004. The effect of audit committee expertise, independence, and activity on aggressive earnings management. *Auditing: A Journal of Practice & Theory* 23 (2): 13-35.

_____, and K. M. Johnstone. 2004. Earnings manipulation risk, corporate governance risk, and auditors' planning and pricing decisions. *The Accounting Review* 79 (2): 277-304.

Bell, T. B., W. R. Landsman, and D. A. Shackelford. 2001. Auditors' perceived business risk and audit fees: Analysis and evidence. *Journal of Accounting Research* 15 (1): 4-24.

Bergstresser, D., and T. Philippon. 2006. CEO incentives and earnings management. *Journal of Financial Economics* 80: 511-29.

Boeker, W., and J. Goodstein. 1993. Performance and successor choice: The moderating effects of governance and ownership. *Academy of Management Journal* 36 (1): 172-86.

Bonazzi, L., and S. M. N. Islam. 2007. Agency theory and corporate governance. *Journal of Modelling in Management* 2 (1): 7-23.

Boumosleh, A. 2009. Director compensation and the reliability of accounting information. *The Financial Review* 44: 525-39.

Brick, I. E., O. Palmon, and J. K. Wald. 2006. CEO compensation, director compensation, and firm performance: Evidence of cronyism. *Journal of Corporate Finance* 12: 403-23.

Brown, L. 1991. Forecast selection when all forecasts are not equally recent. *International Journal of Forecasting* 7 (3): 349-56.

_____. 1997. Analyst forecasting errors. Additional evidence. *Financial Analysts' Journal* 53 (6): 81-8.

Brown, S., S. A. Hillegeist, and K. Lo. 2009. The effect of earnings surprises on information asymmetry. *Journal of Accounting & Economics* 47 (3): 208-25.

Bryan-Low, C. 2002. Meeting expectations used to draw favor, now it invites scrutiny. *The Wall Street Journal* Aug 5, C1.

Burgstahler, D., and I. Dichev. 1997. Earnings management to avoid earnings decreases and losses. *Journal of Accounting & Economics* 24: 99-126.

_____, and M. Eames. 2006. Management of earnings and analysts' forecasts to achieve zero and small earnings surprises. *Journal of Business Finance & Accounting* 33 (5) & (6): 633-52.

Carcello, J. V., and Z. Palmrose. 1994. Auditor litigation and modified reporting on bankrupt clients. *Journal of Accounting Research* 32: 1-30.

_____, and T. L. Neal. 2000. Audit committee composition and auditor reporting. *The Accounting Review* 75 (4): 453-67.

_____, and _____. 2003. Audit committee characteristics and auditor dismissals following "new" going-concern reports. *The Accounting Review* 78 (1): 95-117.

_____, C. Hollingsworth, A. Klein and T. Neal. 2008. Audit committee financial expertise, competing corporate governance mechanisms, and earnings management. Working Paper, University of Tennessee.

_____, D. Hermanson, and Z. Ye. 2011. Corporate governance research in accounting and auditing: Insights to date and directions for future research. Working Paper: University of Tennessee: Knoxville, TN.

Chaney, P., D. C. Jeter, and L. Shivakumar. 2004. Self-selection of auditors and audit pricing in private firms. *The Accounting Review* 79 (1): 51–72.

Charles, S. L., S. M. Glover, and N. Y. Sharp. 2010. The association between financial reporting risk and audit fees before and after the historic events surrounding SOX. *Auditing: A Journal of Practice & Theory* 29 (1): 15-39.

Cheng, Q., and T. Warfield. 2005. Equity incentives and earnings management. *The Accounting Review* 80 (2): 441-76.

Chevis, G., S. Das, and K. Sivaramakrishnan. 2007. Does it pay to consistently meet analysts' earnings expectations? Working paper, Baylor University.

Choi, J., and T. J. Wong. 2007. Auditors' governance functions and legal environments: An international investigation. *Contemporary Accounting Research* 24 (1): 13–46.

_____, J. Kim, and Y. Zang. 2010. Do abnormally high audit fees impair audit quality? *Auditing: A Journal of Practice & Theory* 29 (2): 115-40.

Clarkson, P. M., and D. A. Simunic. 1994. The association between audit quality, retained ownership, and firm-specific risk in U.S vs. Canadian IPO markets. *Journal of Accounting & Economics* 17: 207-28.

Council of Institutional Investors (CII). 1998. *Core policies, positions and explanatory notes*. Washington, DC.

Craswell, A. T., J. R. Francis, and S. L. Taylor. 1995. Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics* 20 (3): 297-322.

Crichfield, T., T. Dyckman, and J. Lakonishok. 1978. An evaluation of security analysts' forecasts. *The Accounting Review* 53 (3): 651-68.

Cullinan, C. P., H. Du, and G. B. Wright. 2008. Is there an association between director option compensation and the likelihood of misstatement? *Advances in Accounting* 24 (1): 16–23.

_____, _____, and W. Jiang. 2010. Is compensating audit committee members with stock options associated with the likelihood of internal control weakness? *International Journal of Auditing* 14: 256-73.

Daily, C. M., and D. R. Dalton. 2002. The problem with equity compensation. *Journal of Business Strategy* Jul/Aug: 28-30.

Davidson, R. A., and D. Neu. 1993. A note on the association between audit firm size and audit quality. *Contemporary Accounting Research* 9 (Spring): 479-88.

Davis, L. R., B. S. Soo., and G. M. Trompeter. 2009. Auditor tenure and the ability to meet or beat earnings forecasts. *Contemporary Accounting Research* 26 (2): 517-48.

DeAngelo, L. 1981a. Auditor independence, "low balling", and disclosure regulation. *Journal of Accounting & Economics* (August) 113-27.

_____. 1981b. Auditor size and auditor quality. *Journal of Accounting & Economics* (December): 183-99.

DeAngelo, H., L. DeAngelo, and D. Skinner. 1994. Accounting choice in troubled companies. *Journal of Accounting & Economics* 17: 113–43.

Dechow, P., R. Sloan, and A. Sweeney. 1996. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research* 13: 1–36.

_____, W. Ge, and C. Schrand. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting & Economics* 50: 344-401.

DeFond, M.L. and J. Jiambalvo, 1994. Debt covenants violation and manipulation of accruals, *Journal of Accounting and Economics* 17, 145–176.

_____, J. R. Francis, and T. J. Wong. 2000. Auditor industry specialization and market segmentation: Evidence from Hong Kong. *Auditing: A Journal of Practice and Theory* 19 (1): 49-66.

_____, K. Raghunandan, and K. Subramanyam. 2002. Do nonaudit services fees impair auditor independence? Evidence from going concern audit opinions. *Journal of Accounting Research* 40 (4): 1247-74.

_____, and J. R. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory* (Supplement): 5-30.

Degeorge, F., J. Patel, and R. Zeckhauser. 1999. Earnings management to exceed thresholds. *Journal of Business* 72 (1): 1-33.

Deloitte. 2010. *Audit Committee Brief* (June). Deloitte Development LLC.

DeZoort, F. T., D. R. Hermanson, D. S. Archambeault, and S. A. Reed. 2002. Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature* 21: 38-75.

_____, D. R. Hermanson, and R. W. Houston. 2003. Audit committee support for auditors: The effects of materiality justification and accounting precision. *Journal of Accounting and Public Policy* 22 (3): 175-99.

Dhaliwal, D., V. Naiker, and F. Navissi. 2010. The association between accruals quality and the characteristics of accounting experts and mix of expertise on audit committees. *Contemporary Accounting Research* 27 (3): 787-827.

Diamond, D. W., and R. E. Verrecchia. 1991. Disclosure, liquidity, and the cost of capital. *Journal of Finance* 46 (4): 1325-59.

Dopuch, N., and D. Simunic. 1982. Competition in auditing: An assessment. *Fourth Symposium on Auditing Research*, University of Illinois.

Du, H., C. P. Cullinan, and G. B. Wright. 2007. Is there a relationship between management and revenue misstatements? *Journal of Forensic Accounting* 8 (1) & (2): 119-40.

Efendi, J., A. Srivastava, and E. Swanson. 2007. Why do corporate managers misstate financial statements? The role of option compensation and other incentives. *Journal of Financial Economics* 85 (3): 667-708.

Elson, C. M. 1995. The duty of care, compensation, and stock ownership. *University of Cincinnati Law Review* 63 (2): 649-711.

Ettredge, M., and R. Greenberg. 1990. Determinants of fee cutting on initial audit engagements. *Journal of Accounting Research* 28 (1): 198-210.

Fama, E. F. 1980. Agency problems and the theory of the firm. *Journal of Political Economy* 88: 288 - 303.

_____ , and M. C. Jensen. 1983. Separation of ownership and control. *Journal of Law and Economics* 26 (2): 301-25.

Farber, D. 2005. Restoring trust after fraud: Does corporate governance matter? *The Accounting Review* 80 (2): 539-61.

Feldmann, D. A., W. J. Read, and M. J. Abdolmohammadi. 2009. Financial restatements, audit fees, and the moderating effect of CFO turnover. *Auditing: A Journal of Practice & Theory* 28 (1): 205-23.

Fich, E. M., and A. Shivdasani. 2005. The impact of stock-option compensation for outside directors on firm value. *The Journal of Business* 78 (6): 2229-54.

_____, and _____. 2007. Financial fraud, director reputation, and shareholder wealth. *Journal of Financial Economics* 86: 306-36.

Flanigan, J. 2002. Andersen's pain will strengthen system. *Los Angeles Times* (Los Angeles, CA) Mar 24, 1.

Francis, J. R. 1984. The effect of audit firm size on audit prices: A study of the Australian market. *Journal of Accounting & Economics* 6 (February): 133-51.

———, and D. Simon. 1987. A test of audit pricing in the small-client segment of the US audit market. *The Accounting Review* 62 (1): 145-57.

Frankel, R., M. McNichols, and G. P. Wilson. 1995. Discretionary disclosure and external financing. *The Accounting Review* 70 (1): 135-50.

_____, M. Johnson, and K. Nelson. 2002. The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review* 77: 71-105.

Frieder, L., and A. Subrahmanyam. 2005. Brand perceptions and the market for common stock. *Journal of Financial and Quantitative Analysis* 40: 57–85.

Geiger, M. A., and D. V. Rama. 2003. Audit fees, nonaudit fees, and auditor reporting on stressed companies. *Auditing: A Journal of Practice & Theory* 22 (2): 53-69.

Goldfarb, Z. A. 2010. Diebold settles fraud charges for $25 million. *The Washington Post* Jun 3 suburban edition, A13.

Graham, J., C. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40 (1): 3-73.

Grullon, G., G. Kanatas, and J. Weston. 2004. Advertising, breadth of ownership, and liquidity. *Review of Financial Studies* 17: 439–61.

Healy, P. M. 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting & Economics* 7: 85-107.

Heidrick and Struggles. 2007. 10th annual corporate board effectiveness study 2006-2007. Chicago, IL.

Hillman, A. J., and T. Dalziel. 2003. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Journal* 28 (3): 383-96.

Hosmer, D. W., and S. Lemeshow. 2000. *Applied logistic regression*, 2nd ed. New York: John Wiley & Sons.

Huang, H., K. Raghunandan, and D. Rama. 2009. Audit fees for initial audit engagements before and after SOX. *Auditing: A Journal of Practice & Theory* 28 (1): 171-90.

Johnson, S. A., H. E. Ryan, and Y. S. Tian. 2007. Managerial incentives and corporate fraud: The sources of incentives matter. Working paper, Texas A&M University.

Johnstone, K. M., and J. C. Bedard. 2003. Risk management in client acceptance decisions. *The Accounting Review* 78 (4): 1003-25.

Kasznik, R., and M. F. McNichols. 2002. Does meeting earnings expectations matter? Evidence from analyst forecast revisions and share prices. *Journal of Accounting Research* 40 (3): 727-59.

Klein, A. 2002. Audit committee, board of director characteristics, and earnings management. *Journal of Accounting & Economics* 33: 375-400.

Klein, B., and K. B. Leffler. 1981. The role of market forces in assuring contractual performance. *Journal of Political Economy* 89 (August): 615-41.

Koh, K., D. Matsumoto, and S. Rajgopal. 2008. Meeting or beating analyst expectations in the post-scandals world: Changes in stock market rewards and managerial actions. *Contemporary Accounting Research* 25 (4): 1067-98.

Krishnan, G., and G. Visvanathan. 2008. Does the SOX definition of an accounting expert matter? The association between audit committee directors' accounting expertise and accounting conservatism. *Contemporary Accounting Research* 25 (3): 827-58.

Krishnan, J. 2005. Audit committee quality and internal control: An empirical analysis. *The Accounting Review* 80 (April): 649-75.

_____, K. Raghunandan, and J. Yang. 2007. Were former Andersen clients treated more leniently than other clients? Evidence from going-concern modified audit opinions. *Accounting Horizons* (December): 423-35.

Lang, M., and R. Lundholm. 1993. Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research* 31 (2): 246-71.

_____, and _____. 2000. Voluntary disclosure and equity offerings: Reducing information asymmetry or hyping the stock? *Contemporary Accounting Research* 17 (4): 623-62.

Lapides, P. D., M. S. Beasley, J. V. Carcello, F. T. DeZoort, D. R. Hermanson, T.L. Neal, and J.G. Tompkins. 2007. *21st century governance and audit committee principles*. Corporate Governance Center, Kennesaw State University.

Larcker, D. F., and S. A. Richardson. 2004. Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research,* 42 (3): 625-58.

Leone, M. 2010. Ex-Diebold CFOs charged with fraud. *CFO.com* Jun 2. Downloaded Jun 10 2011, available at http://www.cfo.com/article.cfm/14502539?f=search.

Lev, B. 1992. Information disclosure strategy. *California Management Review* 34 (Summer): 9-33.

Lys, T., and L. Soo. 1995. Analysts' forecast precision as a response to competition. *Journal of Accounting, Auditing and Finance* 10 (4): 751-65.

Magilke, M. J., B. W. Mayhew, and J. E. Pike. 2009. Are independent audit committee members objective? Experimental evidence. *The Accounting Review* 84 (6): 1959-81.

Marquardt, C. A., and C. I. Wiedman. 1998. Voluntary disclosure, information asymmetry, and insider selling through secondary equity offerings. *Contemporary Accounting Research* 15 (4): 505-37.

McNamee, M., N. Byrnes, and L. Lavelle. 2002. Turn up the heat on board cronyism, Mr. Grasso. *BusinessWeek* Apr 22, Iss. 3779: 36.

Menon, K., and D. D. Williams. 2001. Long-term trends in audit fees. *Auditing: A Journal of Practice & Theory* 20 (1): 115-36.

Messier, W., Jr., S. Glover, and D. Prawitt. 2008. *Auditing and Assurance Services: A Systematic Approach*. 6th edition. New York, NY: McGraw-Hill Irwin.

Miller, M. H., and F. Modigliani. 1966. Some estimates of the cost of capital to the electric utility industry, 1954-57. *American Economic Review* (April 1974): 259-70.

Monks, R., and N. Minow. 2001. *Corporate governance*, 2nd ed. Oxford, UK: Blackwell Publishing.

Munsif, V., K. Raghunandan, D. V. Rama, and M. Singhvi. 2011. Audit fees after remediation of internal control weaknesses. *Accounting Horizons* 25 (1): 87-105.

Myers, S., and N. Majluf. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13 (2): 187-221.

Naiker, V., and D. S. Sharma. 2009. Former audit partners on the audit committee and internal control deficiencies. *The Accounting Review* 84 (2): 559-87.

National Association of Corporate Directors (NACD). 1996. *Report of the NACD Blue Ribbon Commission on director professionalism*. NACD: Washington DC.

_____. 2001. *Director compensation: Purpose, principles, and best practices.* Washington, D.C.: The National Association of Corporate Directors.

_____. 2003. *Director compensation survey 2002-2003*. Washington, D.C.: The National Association of Corporate Directors.

National Commission on Fraudulent Financial Reporting (NCFFR) (the Treadway Commission). 1987. *Report of the National Commission on Fraudulent Financial Reporting*. Washington, D.C.: U.S. Government Printing Office.

New York Stock Exchange / National Association of Securities, Blue Ribbon Committee (BRC) on Improving the Effectiveness of Corporate Audit Committees. 1999. *Report and recommendations of the Blue Ribbon Committee on improving the effectiveness of corporate audit committees*. New York, NY: New York Stock Exchange / National Association of Securities Dealers.

O'Brien, P. 1988. Analysts' forecasts as earnings expectations. *Journal of Accounting & Economics* 10 (1): 53-83.

Palmrose, Z. 1986. Audit fees and auditor size. *Journal of Accounting Research* 24 (1): 97-110.

_____. 1988. Analysis of auditor litigation and audit service quality. *The Accounting Review* 63 (January): 55-73.

Persellin, J. 2009. The impact of form of compensation and likelihood of PCAOB inspection on audit committee member resolution of management/auditor disputes. Working paper, Texas State University. Paper presented at 2009 Auditing Section Midyear Conference.

PricewaterhouseCoopers. 2000. *Audit committee effectiveness: What works best*. 2nd edition. Altamonte Springs, FL: The Institute of Internal Auditors Research Foundation.

Raghunandan, K., and D. Rama. 2006. SOX Section 404 material weakness disclosures and audit fees. *Auditing: A Journal of Practice & Theory* 25 (1): 99–114.

_____, and _____. 2007. Determinants of audit committee diligence. *Accounting Horizons* 21 (3): 265-79.

Ross, S. 1977. The determination of financial structure: The incentive-signaling approach. *Bell Journal of Economics* 8 (1): 23-40.

Ruland, W., S. Tung, and N. E. George. 1990. Factors associated with the disclosure of managers' forecasts. *The Accounting Review* 65 (3): 710:21.

Sanders, W. G., and D. C. Hambrick. 2007. Swinging for the fences: The effects of CEO stock options on company risk taking and performances. *Academy of Management Journal* 50: 1055-78.

Sankaraguruswamy, S., and S. Whisenant. 2005. Pricing initial audit engagements: Empirical evidence following public disclosure of audit fees. Working paper, University of Houston.

Sarbanes-Oxley Act (SOX). 2002. Public Law No: 107-204. Washington, D.C.: Government Printing Office.

Securities and Exchange Commission (SEC). 1999a. Letter from Lynn E. Turner, Chief Accountant: Call for academic research on key accounting issues. Available at: http://www.sec.gov/news/extra/aaacall.htm.

____. 1999b. NYSE rulemaking. Release No. 34-42233; File No. SR-NYSE-99-39. Washington, D.C.: Government Printing Office.

_____. 1999c. NASD rulemaking. Release No. 34-42231; File No. SR-NASD-99-48. Washington, D.C.: Government Printing Office.

_____. 1999d. SEC Staff Accounting Bulletin No. 99: Materiality. Washington, D.C.: Government Printing Office.

_____. 2003. NASD and NYSE rulemaking: Relating to corporate governance. Release No. 34-48745. Washington, D.C.: Government Printing Office.

_____. 2007. Division of Corporate Finance: Staff observations in the review of executive compensation disclosure. Available at: http://www.sec.gov/divisions/corpfin/guidance/execcompdisclosure.htm.

_____. 2009. SEC charges General Electric with accounting fraud. 2009-178. Available at: http://www.sec.gov/news/press/2009/2009-178.htm.

Sharma D. S., and V. D. Sharma. 2011. Audit committee independence: Regulatory developments, the empirical literature and directions for future Research. *Handbook on Emerging Issues in Corporate Governance*, World Scientific Publishing Co. Inc.

Sharma, V. D., and E. Iselin. 2006. Reputation, tenure and compensation of independent audit committee members and financial restatements. Paper presented at 2006 American Accounting Association Annual Meeting, August 6–9, Washington, DC.

_____, V. Naiker, and B. Lee. 2009. Determinants of audit committee meeting frequency: Evidence from a voluntary governance system. *Accounting Horizons* 23 (3): 245-63.

Simon, D., and J. Francis. 1988. The effects of auditor change on audit fees: Tests of price cutting and price recovery. *The Accounting Review* 63 (April): 255-69.

Simunic, D. A. 1980. The pricing of audit services: Theory and evidence. *Journal of Accounting Research* 18 (1): 161-90.

_____, and M. Stein. 1996. Impact of litigation risk on audit pricing: A review of the economics and the evidence. *Auditing: A Journal of Practice & Theory* 15: 119-34.

Sinha, P., L. Brown, and S. Das. 1997. A re-examination of financial analysts' differential earnings forecast accuracy. *Contemporary Accounting Research* 14 (1): 1- 42.

Sloan, R. G. 2001. Financial accounting and corporate governance: a discussion. *Journal of Accounting and Economics* 32: 335-47.

Taub, S. 2008. Xerox, KPMG settle investor suit. *CFO.com* Mar 27. Downloaded on Jun 10 2011, available at http://www.cfo.com/article.cfm/10942620?f=search.

U.S. Senate. 2002a. Oversight hearing on *Accounting and investor protection issues raised by Enron and other public companies*. Committee on Banking, Housing and Urban Affairs. Washington, DC: GPO.

____ 2002b. *The role of the board of directors in Enron's collapse*. Hearing before the Permanent Subcommittee of Investigations of the Committee on Governmental Affairs. S. Hrg. 107–511. Washington, D.C.: Government Printing Office.

Vafeas, N. 2003. Length of board tenure and outside director independence. *Journal of Business Finance and Accounting* 30 (7/8): 1043-64.

Venkataraman, R., J. P. Weber, and M. Willenborg. 2008. Litigation risk, audit quality, and audit fees: Evidence from initial public offerings. *The Accounting Review* 83 (5): 1315-45.

Walsh, M. W., and J. Healy. 2009. Ex-chief of A.I.G. settles fraud case for $15 million. *The New York Times* Aug 7 late edition, B1.

Watkins, A. L., W. Hillison, and S. E. Morecroft. 2004. Audit quality: A synthesis of theory and empirical evidence. *Journal of Accounting Literature* 23: 153-93.

Whisenant, S., S. Sankaraguruswamy, and K. Raghunandan. 2003. Evidence on the joint determination of audit and non-audit fees. *Journal of Accounting Research* 41 (4): 721-44.

Wiseman, R. M., and L. R. Gomez-Mejia. 1998. A behavioral agency model of managerial risk taking. *Academy of Management Review* 23: 133-53.

Yang, J., and J. Krishnan. 2005. Audit committees and quarterly earnings management. *International Journal of Auditing* 9 (3): 201-19.

Yermack, D., 2004. Remuneration, retention, and reputation incentives for outside directors. *The Journal of Finance* 59: 2281–2308.

VITA

MARIA FILOFTEIA RICKLING

	Born, Cincinnati, Ohio
	B.B.A., Accounting and Management Information Systems University of Cincinnati Cincinnati, Ohio
2007	M.Acc, Accounting Florida International University Miami, Florida
2011	Doctoral Candidate in Accounting Florida International University Miami, Florida