

From: [Stephen Howard Fuller](#)
To: [Comments](#)
Subject: Study on Critical Audit Matters
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Attachments: [Critical Audit Matter Study - August 2016.docx](#)

August 15, 2016

Office of the Secretary
Public Company Accounting Oversight Board
1666 K Street, N.W.
Washington, D. C. 20006-2803

Dear Members of the Board:

Please find attached a study I hope you will find relevant to:

Docket 034: Proposed Auditing Standards on the Auditor's Report and the Auditor's Responsibilities Regarding Other Information and Related Amendments

For your convenience, following is an abstract of the study:

ABSTRACT:

Motivated by the current PCAOB proposed standard regarding expansion of the auditor's reporting model, this study investigates the effect of auditor reporting choice on management disclosure decisions. The proposed standard would require auditors to identify and provide information about the most significant audit and financial reporting issues encountered during the audit in a new section of the audit report on Critical Audit Matters (CAMs). I explore how auditor choices about reporting on CAMs might affect manager disclosure decisions. In addition, the study investigates whether this effect depends on a very important governance structure, the audit committee. I find that management reacts to the auditor shining a spotlight on a highly uncertain critical accounting estimate by increasing their own disclosure of the matter and that this effect varies directly with the strength of the audit committee's oversight. In addition, I find that as auditors increase the level of detail provided in their CAM reporting, management responds with increased disclosure. Finally, when the auditor provides a detailed CAM discussion, it appears that managers are likely to increase disclosure of quantitative information that would enhance the financial statement user's ability to quantify the risk in a critical accounting estimate. The study provides ex ante insights on how a mandated change in the auditor's reporting model might affect the level of information provided by management and received by investors.

Best Regards,

Stephen H. Fuller

**The Effect of Auditor Reporting Choice and Audit Committee Oversight Strength
on Management Financial Disclosure Decisions**

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August 2016

This study is based on my dissertation and I express my deep gratitude to the members of my dissertation committee: Jennifer Joe (Chair), Kathryn Kadous, Lisa Lambert, Benjamin Luippold and Ivo Taffkov. My study benefited greatly from their patient guidance and commitment to excellence in research. In addition, I gratefully acknowledge the many parties who have provided assistance and feedback over the course of my dissertation including Christopher Agoglia, Ellen Best, Carol Bishop, Nerissa Brown, Dana Hermanson, Yoon Ju Kang, Siva Nathan, Usha Ramachandran, Kerri-Ann Sanderson, Galen Sevcik, Doug Stevens, Han Stice, Laura Swenson, Roger White, and all of the Georgia State University faculty, staff and doctoral students. I am especially grateful to the many professionals who kindly shared their valuable time and experience for my study.

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ABSTRACT:

Motivated by the current PCAOB proposed standard regarding expansion of the auditor's reporting model, this study investigates the effect of auditor reporting choice on management disclosure decisions. The proposed standard would require auditors to identify and provide information about the most significant audit and financial reporting issues encountered during the audit in a new section of the audit report on Critical Audit Matters (CAMs). I explore how auditor choices about reporting on CAMs might affect manager disclosure decisions. In addition, the study investigates whether this effect depends on a very important governance structure, the audit committee. I find that management reacts to the auditor shining a spotlight on a highly uncertain critical accounting estimate by increasing their own disclosure of the matter and that this effect varies directly with the strength of the audit committee's oversight. In addition, I find that as auditors increase the level of detail provided in their CAM reporting, management responds with increased disclosure. Finally, when the auditor provides a detailed CAM discussion, it appears that managers are likely to increase disclosure of quantitative information that would enhance the financial statement user's ability to quantify the risk in a critical accounting estimate. The study provides *ex ante* insights on how a mandated change in the auditor's reporting model might affect the level of information provided by management and received by investors.

Keywords: Auditor Reporting, Critical Audit Matters, Audit Committee Oversight, management disclosure

I. INTRODUCTION

This study examines how managers' decisions to disclose information about critical accounting estimates might be sensitive to whether auditors bring attention to the estimates with their reporting choices. Investors and regulators contend that auditors have information about their clients' financial reporting that investors are demanding (PCAOB 2011b), but that management is choosing not to disclose (SEC 2003, PCAOB 2011b). The importance of this issue to investors was highlighted by the failure of financial sector companies to make adequate disclosure regarding the uncertainty surrounding fair value estimates, which some contend was a major contributing factor to the global financial crisis experienced in the late 2000s (PCAOB 2011a). To explore the issue, the Public Company Accounting Oversight Board (PCAOB) initiated a project in 2011 addressing how the current auditor's reporting model might be modified to provide information of greater value to investors (PCAOB 2011a). Highly debated changes to the auditor's reporting model have been proposed that would require auditors to bring heightened attention to key areas of uncertainty in the financial statements. It is important to shed light on how managers might respond to differing levels of attention brought by auditors to critical accounting estimates by adjusting their own voluntary disclosure decisions.

Effects of the proposed auditing standard are likely to be influenced by the corporate governance environment of the firm. Audit committees are a key element of corporate governance by virtue of their role in the monitoring of financial reporting (Blue Ribbon Committee 1999; Agoglia, Douppnik, and Tsakumis 2011). Prior research has consistently found that stronger audit committees are associated with higher quality financial reporting (Agoglia et al. 2011; Abbott, Parker and Peters 2004; Bédard et al. 2004). In the course of the debate over the PCAOB auditor's reporting model project, many audit committee members voiced concerns

that expanding the auditor's reporting model might usurp the audit committee's responsibility for investor protection (PCAOB 2011b). However, audit committee oversight is likely to play a pivotal role in determining how changes to the auditor's report translate to changes in management's financial disclosure. Audit committees review financial statements and the auditor's report prior to their release (Beasley, Carcello, Hermanson, and Neal 2009), and management must consider the audit committee's reaction to the content of the auditor's report. Management's sensitivity to the auditor's reporting choices likely depends on the level of accountability felt by management to the audit committee. Therefore, I also examine whether the impact of the proposed standard on management disclosure choice is conditional on the strength of the audit committee's oversight.

The financial reporting and auditing of critical accounting estimates is an area that has received widespread attention in recent years due to the importance of these estimates to the financial statements and to the decisions of investors (Griffith, Hammersley, and Kadous 2015). The use of critical accounting estimates is pervasive in many financial reporting settings including fair value, asset impairment, product warranty and liability reserves and post-employment benefits (Griffith et al. 2015). Due to the uncertainty and subjectivity surrounding critical accounting estimates, there has been a consistent call by regulators and the markets for management to provide more extensive disclosure regarding the risk inherent in critical accounting estimates (e.g., SEC 2003, PCAOB 2011b). Unfortunately, such disclosure has not been broadly provided by issuers (SEC 2003; PCAOB 2011b).

The audit process represents an avenue for improving issuers' compliance with SEC regulations regarding disclosure of critical accounting estimates for several reasons. First, auditors interact with their clients on financial reporting issues as a matter of routine, allowing

auditors to keep abreast of developments in the critical accounting areas of their clients. Next, some stakeholders feel that the proposed expansion of the audit report will provide auditors with greater leverage to compel clients to provide improved disclosure of critical accounting issues (PCAOB 2011b). Finally, the PCAOB, by virtue of their inspection powers over audit firms, can motivate audit firms to appropriately identify which client issues are most important to cover in the expanded audit report (Carcello, Hollingsworth, and Mastroliia 2011).

In August 2013, the PCAOB released a proposed auditing standard dealing with the auditor's reporting model which requires that auditors include in their audit report a section dealing with "Critical Audit Matters" (CAMs) which "involved the most difficult, subjective, or complex auditor judgments or posed the most difficulty to the auditor in obtaining sufficient appropriate audit evidence or forming an opinion on the financial statements" (PCAOB 2013, 6). Under the proposed standard, the auditor would be required to disclose information about each CAM in a new section of the audit report or to state that there are no CAMs (PCAOB 2013). Importantly, auditors would still have broad discretion over the level of detailed information reported. In the course of the debate over expansion of the audit report, auditors have indicated they would only be supportive of providing factual and objective information in a CAM (PCAOB 2011b). Other constituencies in the debate argued that if auditors provide only limited information and mainly refer to management disclosure, the change would not provide investors with the information they are demanding (PCAOB 2011b). Therefore, I explore whether the level of detail provided in the auditor's reporting on the CAM impacts the manager's decision regarding how much information to disclose.

To address my research questions, I conducted an experiment with highly experienced public company financial executives, primarily chief financial officers. This high caliber group

of participants was vital given the importance of obtaining reliable *ex ante* insights on the proposal from managers that will be directly impacted by the proposed standard. Participants rated the extent of disclosure they would choose to make related to a critical accounting estimate made by a hypothetical company as well as the importance of a variety of specific disclosure elements. I manipulated the auditor reporting choice regarding an accounting estimate made by the company at three levels: (i) No CAM (control); (ii) Short CAM with a brief description in the audit report; or (iii) Long CAM with a detailed description in the audit report. I also manipulated the strength of the audit committee's oversight at two levels, moderate and strong. Based on economic theory regarding the incentives surrounding disclosure as well as accountability theory, I predicted increases in the level of detail provided in the auditor's CAM reporting of an issue would lead to increased disclosure by managers, with the strongest effect coming in the presence of strong audit committee oversight.

Consistent with expectations, I found a joint effect of auditor CAM reporting choice and audit committee oversight strength on manager disclosure decisions. The increase in the manager's disclosure resulting from the auditor providing detailed discussion of a CAM was greatest in the presence of strong audit committee oversight, thus highlighting the continued importance of the audit committee to the quality of financial reporting. Further, I found that managers did not increase their disclosure when the auditor included only cursory discussion of the CAM in its audit report providing support for this concern voiced by some stakeholders in the debate. I also investigated the specific elements of disclosure a manager considers when making financial disclosure. I found that elements of disclosure that enhance the ability of financial statement users to quantify the level of risk in a critical accounting estimate (e.g., range of, key assumptions in, and sensitivity analysis of the estimate) are more likely to be disclosed

when the auditor heightens the attention on a critical accounting estimate through its CAM reporting, and that this effect depends on the strength of the audit committee's oversight.

The study makes several contributions to regulators, practitioners and accounting researchers. First, the study provides timely feedback to regulators and stakeholders on the potential effects of the proposed standard that will inform regulator decision-making. Several important topics under debate are addressed in the study including the appropriate level of detail that should be required in the auditor's CAM reporting and the role of the audit committee. Next, the study answers the call for experimental research on how proposed policy changes might impact the nature and quality of financial reporting (Maines 1994; Beresford 1997). Archival information in the U.S. is not available to analyze the impact of the proposed change. Experimental research provides the advantage of seeing *ex ante* what might happen in a setting "as if" the change had been implemented (Maines 1994). While several concurrent experimental studies have begun to address the implications of the proposed standard, to my knowledge, this is the first experimental study dealing directly with the effect of auditor reporting choices on manager disclosure decisions. Finally, the study extends the accounting literature on the impact of audit committee oversight on the quality of financial reporting and disclosure.

The remainder of this paper is organized as follows. Section II provides theory and hypothesis development, Section III describes the research design, Section IV presents the results of the study, and Section V concludes.

II. BACKGROUND AND THEORY

PCAOB Project

In June 2011, the PCAOB initiated a project to explore how the current auditor's reporting model might be modified to provide information of greater value to investors (PCAOB

2011a). To many, the current auditor’s reporting model is primarily seen as a “pass/fail” model that simply provides reasonable assurance as to whether or not the financial statements are presented free of material misstatement (PCAOB 2011b). Many investors have argued that auditors could provide much more useful reporting to investors if their reporting was expanded to provide additional information on a wide array of areas including critical accounting estimates and their impact on the financial statements (PCAOB 2011b, 2012).¹

The PCAOB conducted extensive debate related to the auditor’s reporting model project including all the major stakeholders – auditors, management, investors and audit committees. Auditors, management and the audit committee expressed many concerns about the project, chief among them that auditors should not be the source of “original information” about the company, which should remain the responsibility of management (PCAOB 2011b).² Additional concerns raised included the potential cost and administrative burdens (PCAOB 2011b). Investors, however, expressed significant support for the prospect of expanding the content provided by auditors in their reports. Eventually, the proposal to expand and mandate the use of emphasis of matter (EOM) paragraphs was the option that received the greatest support on both sides of the debate (PCAOB 2011b, 2012).

¹ The PCAOB issued a concept release on the project proposing three different methods by which expanded auditor reporting might be pursued: (i) the requirement of an “Auditor’s Discussion and Analysis” (ADA) related to the audit; (ii) extension of the audit report to cover certain “information outside the financial statements”; or (iii) “required and expanded use of emphasis paragraphs” (PCAOB 2011a, 12).

² Current SEC regulations require firms to make supplemental disclosure in Management’s Discussion and Analysis (MDA) regarding critical accounting estimates if they are material due to their subjectivity and impact on the financial statements (SEC 2003). However, despite these regulations, investors and regulators continue to assert that the appropriate level of disclosure is not being made (PCAOB 2011b). At present, auditors are not generally required to provide assurance regarding their clients’ MDA and, accordingly, do not opine on the adequacy of the critical accounting estimates disclosure contained in MDA. Instead, they are merely required in the current model to read the client’s MDA and resolve any inconsistencies between the MDA and the audited financial statements (PCAOB 2003).

In August 2013, the PCAOB released a proposed auditing standard dealing with the auditor's reporting model similar to the EOM paragraph approach in the concept release. Specifically, the proposed standard would require auditors to include in their audit report a section dealing with "Critical Audit Matters." Pursuant to the proposed standard, CAMs consist of matters which "involved the most difficult, subjective, or complex auditor judgments or posed the most difficulty to the auditor in obtaining sufficient appropriate audit evidence or forming an opinion on the financial statements" (PCAOB 2013, 6). The auditor is required to disclose certain information about each CAM in the audit report or to state that there were no CAMs. For each CAM, the auditor must (i) "identify the critical audit matter"; (ii) "describe the considerations that led the auditor to determine that the matter is a critical audit matter"; and (iii) "refer to the relevant financial statement accounts and disclosures that relate to the critical audit matter, when applicable" (PCAOB 2013, 16).

In the debate surrounding the audit reporting model project, auditors generally took the position that any expansion of the auditor report should be limited to objective factual information for which auditors are not the original source and make reference to where the issue is discussed by management (PCAOB 2011b). They further argued that merely identifying an uncertain issue in the audit report would likely lead to disclosures by management that were among the most complete in the financial statements (PCAOB 2011b). Other stakeholders (e.g., investors) took the position that such a limited approach by the auditor provided little or no benefit and amounted to "roadmapping" for financial reporting (PCAOB 2011b). They called for greater information content such as discussion of *why* the auditor felt it was important to emphasize the matter and what uncertainties applied to the area (PCAOB 2011b). This study seeks to examine what impact reporting on CAMs might have at varying levels of detail.

Several concurrent studies explore the effect of the proposed auditing standard on various stakeholders in the financial reporting process. Several of these studies in a variety of specific contexts have found that auditor reporting of a CAM may alternatively lead to a reduced level of legal liability for auditors (Kachelmeier, Schmidt, and Valentine 2014 WP; Brasel, Doxey, Grenier, and Reffett 2016; Brown, Majors, and Peecher 2014 WP) or higher auditor liability assessments (Backof, Bowlin, and Goodson 2016 WP; Gimbar, Hansen, and Ozlanski 2016).

Other studies address the impact of auditor CAM reporting on investor decisions. Christensen, Glover, and Wolfe (2014) find that reporting of a CAM concerning fair value decreased the likelihood that non-professional investors would invest in the target firm. Sirois, Bedard, and Bera (2015 WP) found that discussion of a “key audit matter” in the audit report led to greater “information search” about the matter by non-professional investors. Interestingly, they also found that participants indicated “lower perceived audit quality” in the areas of the audit corresponding with the key audit matter (Sirois et al. 2015 WP). The relevance of these studies to my study lies in the many different factors that bear on the auditor’s decision whether or not to report an audit issue as a CAM, suggesting that there might be significant variance in that decision.

One concurrent study addresses the influence of auditor key audit matter reporting requirements on auditor judgments. Gay and Ng (2015 WP) study whether a key audit matter reporting requirement influences the auditor’s willingness to discuss an aggressive accounting estimate with the audit committee and/or accept the aggressive estimate, presumably to avoid discussion of the estimate with the audit committee. They also address whether the proactivity/reactivity of the audit committee plays a role in the decision. They find that when auditors face a reactive audit committee and a key audit matter reporting requirement, auditors

are less likely to discuss the aggressive estimate with the audit committee and more likely to accept the estimate than if there is no key audit matter reporting requirement.

To my knowledge, there is no concurrent study that specifically addresses the effect of the proposed standard on management financial disclosure decisions. However, there is one study that addresses the “communication openness” of non-financial management toward auditors in the presence of a CAM reporting requirement (Cade and Hodge 2014 WP). The authors find that non-financial managers that have private information that the auditor is unaware of concerning “key accounting estimates” are less likely to openly communicate with their auditors when the auditor is required to report on the client’s key accounting estimates than when they are not (Cade and Hodge 2014 WP). Their study is a valuable complement to this study in the sense that it addresses an important precursor to the auditor’s CAM reporting decision – the ability of the auditor to obtain all the relevant knowledge of the issue needed to make an informed decision with regard to CAM reporting.

Prior Research on Management Disclosure Choice

Prior research has identified several factors affecting management’s choice to make disclosure including a variety of offsetting incentives. On one hand, managers have a number of positive incentives to make greater disclosure. Managers might provide higher quality disclosure to establish a reputation for credibility with investors (Stocken 2000; Beyer, Cohen, Lys, and Walther 2010) for both themselves and the firm. Such a reputation can grant a number of economic benefits such as higher firm valuation and lower cost of capital (Beyer et al. 2010), and a reduction in litigation risk (Skinner 1997; Field, Lowry, and Shu 2005; Beyer et al. 2010).

On the other hand, managers also have incentives discouraging greater disclosure. First, since management compensation is frequently sensitive to stock price performance, managers

might desire to avoid, or at least postpone, disclosure of bad news to avoid negative stock price impacts (Beyer et al. 2010). Second, greater disclosure has the potential for proprietary costs to the firm as competitors could derive information from disclosure that is detrimental to the firm's interests (Fischer and Verrecchia 2004; Arya, Frimor, and Mittendorf 2010; Beyer et al. 2010).

These offsetting incentives likely motivate management to seek a level of disclosure that secures the greatest net benefit after considering costs of the disclosure. Importantly, managers are influenced in this judgment by whether investors know that management has private information (Beyer et al. 2010). If investors are thought to know less about management's possession of private information, management would likely provide less voluntary disclosure of bad news (Dye 1985; Jung and Kwon 1988; Penno 1997; Pae 2002; Beyer et al. 2010).

An auditor's decision to report a matter as a CAM effectively shines a spotlight on the issue. As a result, managers are more likely to perceive a higher level of investor attention to and knowledge about the issue. Management would thus be more likely to increase the level of disclosure for the subject of the CAM due to a shift in its incentives. Management would derive less benefit from lack of disclosure because they would expect investors to "fill in the blanks."³ In addition, if the matter was spotlighted by the auditor, management's concern would shift to its reputation and litigation risk, both of which call for increased disclosure. Furthermore, if the auditor's reporting on the CAM was more expansive and included a detailed discussion of *why* the auditor was emphasizing the matter, the perceived level of investor knowledge would be

³ Prior accounting research (Hammersley 2006) has found that experts in a domain (e.g., industry expert auditors) are adept at elaborating full "cognitive representations" of a problem from partial information sets. In the context of this study, expert financial statement users such as industry analysts could be expected to assimilate information in an auditor's CAM reporting, even if it is incomplete, to identify areas of undisclosed risk in the financial statements.

even higher and should lead to even greater level of disclosure. Based on the foregoing discussion, primarily of economic incentives to disclose, I propose the following hypothesis:

H1: As the auditor increases the level of detailed reporting given a critical audit matter in its audit report, the manager will increase the level of disclosure made about the matter.

Audit Committee's Role in Financial Reporting

Audit Committees provide a critical oversight role over financial reporting (Agoglia et al. 2011; Blue Ribbon Committee 1999; Beasley et al. 2009) which has only increased subsequent to the passage of the Sarbanes Oxley Act of 2002 (SOX). Among its provisions, SOX emphasized the importance of audit committee member independence and financial expertise (U.S. House of Representatives 2002; Agoglia et al. 2011). Prior research has characterized stronger audit committees as being more independent, having greater financial expertise, and meeting more frequently (Bédard et al. 2004; Agoglia et al. 2011). These audit committee characteristics have been found to lead to improvements in financial reporting quality (Agoglia et al. 2011; Abbot et al. 2004; Bedard, Chtourou, and Courteau 2004). Of particular significance to this study, Agoglia et al. (2011) found evidence that stronger audit committees constrain “opportunistic reporting” by management via exploitation of “bright-line” rules-based accounting standards.

Prior research on audit committee oversight has also identified variance in audit committees' approach to their oversight responsibilities. For example, two different survey studies (Beasley et al. 2009; Cohen, Krishnamoorthy, and Wright 2010) addressed the audit committee process and explored how audit committees executed their oversight responsibilities. Beasley et al. (2009) surveyed 42 audit committee members and found evidence that some audit committee members felt that oversight of the financial reporting process by the audit committee

was somewhat “ceremonial” while others felt that the audit committee was deeply involved. Cohen et al. (2010) surveyed 30 audit partners and managers about their perceptions of audit committee oversight. In their survey, only 52% of the respondents indicated that the audit committee impacted the “resolution of contentious” accounting and reporting matters between management and auditors.

The relationship between audit committee oversight strength and financial reporting quality can be explained by management’s accountability to the audit committee. The psychology literature identifies accountability as an effective motivator of human behavior. According to Kang (2014 WP) under accountability theory (Tetlock, Skitka, and Boettger 1989), people adopt “social and cognitive strategies ... to obtain acceptance from, or avoid conflict with” parties to whom they are accountable (Kang et al. 2014 WP; Tetlock et al. 1989). In the context of financial reporting, managers are accountable to many different parties, including investors, regulators, their own bosses, and audit committees (Cohen, Krishnamoorthy, and Wright 2004; U.S. House of Representatives 2002). Audit committees consist of a subset of the firm’s board of directors, who oversee the firm’s management and have the authority to terminate management. Accordingly, audit committees represent a high stakes source of accountability to management.

As part of their duties, audit committees communicate with both management and auditors and review the company’s financial statements, disclosures and audit report (Beasley et al. 2009). Since management has incentives to avoid disclosure, one purpose for the audit committee’s oversight of financial reporting is to constrain management’s opportunistic disclosure decisions (Agoglia et al. 2011). I contend that such audit committee constraint on management opportunism is inconsistent with the preferences of management.

Prior research streams in psychology and accounting identify the concept of “motivated sensitivity” (Ditto, Scepansky, Munro, Apanovich, and Lockhart 1998; Hales, Kuang and Venkataraman et al. 2011; Hales 2007) and its impact on the processing of “preference-inconsistent information” (Ditto et al. 1998). In motivated sensitivity, people are expected to asymmetrically process information that is preference-consistent versus preference-inconsistent. Similar to motivated reasoning theory (Kunda 1990; Kadous, Kennedy and Peecher 2003; Hales 2007; Hales et al. 2011), information that is preference-consistent is expected to be shallowly processed and readily accepted. However, in motivated sensitivity, preference-inconsistent information is expected to be processed more deeply and have a greater influence on the final judgment (Ditto et al. 1998). Preference-inconsistent information is likely to signal some type of potential harm and so it is in the best interest of the individual to consider the information deeply (Ditto et al. 1998). In the context of this study, an auditor’s reporting of a critical accounting estimate as a CAM is inconsistent with management’s preference because it increases the audit committee’s scrutiny of management’s disclosure decision. Furthermore, the strength of the audit committee should impact the sensitivity of the manager to the information conveyed by the CAM reporting due to the differing level of accountability felt by the manager to the audit committee. Accordingly, managers facing stronger audit committee oversight should be expected to process more deeply and be more influenced in their disclosure by the content of CAM reporting than managers facing only moderate audit committee oversight.

Prior accounting research on accountability identifies various strategies accountable parties employ to avoid conflict with parties to whom they are accountable (Gibbins and Newton 1994; Peecher, Solomon, and Trotman 2013; Kang 2014 WP). For example, accountable parties may “shift their attitude toward” the attitudes of their evaluators, may become defensive and try

to justify their contrary attitudes, or may “expend cognitive effort” to devise a strategy to avoid conflict with the evaluator (Gibbins and Newton 1994). One determining factor for the strategy used is whether the attitudes of the evaluator are known (Gibbins and Newton 1994; Peecher et al. 2013). When such attitudes are known, Gibbins and Newton (1994) identify “attitude shift” as a potentially effective strategy. Managers confronted with strong audit committee oversight are very likely to perceive that high quality financial reporting is a key mandate of the audit committee (Kang 2014 WP). Accordingly, they are likely to adopt strategies to provide higher quality financial reporting in order to avoid conflict with the audit committee. Agoglia et al. (2011) find evidence of this for managers who face strong audit committees. Managers in the study indicated that concern over “second-guessing” of their accounting decisions by the audit committee was greater when the audit committee was strong than when it was weak leading managers to make more conservative accounting treatment decisions (Agoglia et al. 2011).

Recall that H1 predicts that as the spotlight on a critical accounting estimate increases, managers will increase the level of disclosure made regarding the critical accounting estimate. Based on the foregoing discussion, I predict that this effect will be moderated by the strength of audit committee oversight and therefore propose the following hypothesis:

H2: Managers will increase the level of disclosure made regarding a critical audit matter more in response to increased level of detail given the matter in the audit report when the audit committee’s oversight is strong than when it is moderate.

The pattern of results predicted in H1 and H2 is presented in Figure 1.

[Insert Figure 1 here]

III. METHOD

Participants

Given the high degree of professional judgment required for the experimental task, it was important to ensure that participants had strong task-relevant experience (Trotman 2005). Accordingly, participants are seasoned public company financial executives, primarily CFOs, as they are the most likely to make the key financial disclosure decisions for their organizations. I identified potential participants in the Audit Analytics database of officer changes. I collected recent CFO appointments for public companies between 2007 and mid-2014 with positive revenues up to \$2 billion.^{4,5} Potential participants were invited to participate in the study via a recruitment cover letter which described the study and its importance. The mailing also included the experimental materials and a stamped return envelope. I mailed a total of 1,889 packages⁶, 123 of which were returned as undeliverable, for a net total of 1,766. A total of 145 participants completed the experiment, for a response rate of 8.2%.⁷

Table 1 presents the demographics of participants in the study.⁸ The participants' experience is a strong match for the demands of the experimental task. Participants had a mean

⁴ In the vast majority of cases, mailings were only sent to one CFO per company. In five cases, mailings were inadvertently sent to two different individuals who had been appointed to CFO for the same company at different times. In addition, in one case, two mailings were sent to one individual who was concurrently CFO of two different companies. In total, these mailings comprise less than 1% of the population to which mailings were sent.

⁵ I followed the approach of Bishop, Hermanson, and DeZoort (2014) in choosing to recruit participants from companies with positive revenues up to \$2 billion for several reasons. First, the positive revenue requirement was to focus on operational companies. Next, I reasoned that companies under \$2 billion would be both more likely to respond and have CFOs more likely to be deeply involved in the financial reporting of their firms.

⁶ The packages were sent out in a series of four mailings over a four-month period. The first mailing was sent in equal proportions to the six treatment conditions in the study. In order to achieve adequate sample size in each treatment condition, subsequent mailings were sent in proportions which emphasized cells which had previously received fewer responses from participants. To test for differences between mailings, I added MAILING as a covariate to all the ANOVAs in Tables 2-4. In all cases, MAILING was not significant (all p 's > .29, two-tailed).

⁷ The response rate of 8.2% falls within the range of response rates in recent studies involving accounting and finance professionals including Agoglia et al. 2011 (11.3%); Bennett, Hatfield, and Stefaniak 2015 (5.6%); and Bishop et al. 2014 WP (20%). To address whether non-response bias had any effect on my primary dependent variable, *Extent of Disclosure*, I added an early/late (EARLYLATE) response indicator as a covariate to all ANOVAs reported in Tables 2-4. In all cases, EARLYLATE was not significant in the analyses (all p 's > .51, two-tailed).

⁸ Demographic information excludes six participants that failed a key manipulation check and were excluded from results reported for this study. See note 20 for further discussion.

work experience of 29.2 years⁹. A total of 133 (95.7%) of the participants indicated their current title was CFO and all participants have had significant responsibility for their firm's financial reporting at some point. Approximately 73.4% of the participants were current or former CPAs, 71.2% had experience as an auditor, and 24.5% were current or former audit committee members. Mean age of the participants was 54.0 and 89.1% were male.^{10,11}

[Insert Table 1 here]

Design

Independent Variables

I utilized a 2X3 full factorial between subjects design. My first independent variable, *Audit Committee Oversight Strength* (hereafter “*AC Strength*”), was varied at two levels, moderate and strong. My manipulation of *AC Strength* focused on the expertise of the audit committee members (Agoglia et al. 2011) as well as the audit committee's oversight of financial reporting. Prior research has found that while most audit committees have at least one financial expert as defined by SEC rules, a majority of all audit committee members do not have expertise in accounting (Cohen, Hoitash, Krishnamoorthy, and Wright et al. 2014; Badolato, Donelson and Ege 2014). Thus, in the strong *AC Strength* condition, all three members of the audit committee were described as accounting experts with direct accounting or financial reporting experience

⁹ Eleven of the 139 participants (7.9%) did not give precise years of work experience. Rather, they inserted a”+” after the given number (e.g., 30+). In the interest of conservatively estimating work experience, I coded these as the given number (e.g., 30 for “30+”).

¹⁰ One participant failed to indicate gender and two participants failed to indicate age. These participants are excluded from the reported demographic information for age and gender.

¹¹ I tested for systematic differences between experimental cells for all key demographic variables across all ANOVAs which I report as primary results. Only one variable, GENDER, yielded a significant difference between cells in any of the comparisons ($\chi^2_3=8.481$, $p=.037$, two-tailed when only No CAM and Short CAM conditions were analyzed). To determine whether GENDER had any effect on my primary dependent variable, *Extent of Disclosure*, I added GENDER as a covariate to an ANCOVA for the No CAM vs Short CAM comparison. GENDER was not significant in the ANCOVA ($F_{1,86}=.173$, $p=.68$, two-tailed). Accordingly, I did not include GENDER in the reported ANOVA results.

(Agoglia et al. 2011). In the moderate *AC Strength* condition, only 1 of the three audit committee members was described as a finance expert and none of the members had direct accounting or financial reporting expertise (Agoglia et al. 2011).¹² Prior research has also identified significant variance in the intensity of audit committees' approach to their oversight responsibilities (Beasley et al. 2009; Cohen et al. 2010). Therefore, in the strong *AC Strength* condition, the audit committee played an active role in resolution of challenging accounting and reporting issues including asking many questions about these issues. In the moderate *AC Strength* condition, the audit committee played a limited role in resolution of challenging accounting and reporting issues and occasionally asked questions about these issues. Excerpts of the *AC Strength* manipulations are presented in Appendix A.

My second independent variable, *Auditor Reporting Choice*, was varied at three levels in order to investigate whether the amount of detail provided in the auditor's CAM discussion had an effect on managers' disclosure decisions beyond the identification of the issue as a CAM. In the No CAM (control) condition, participants were told that the auditor had decided not to treat the critical accounting estimate as a CAM. The Short CAM and Long CAM conditions were designed to address the concern raised by some stakeholders that if auditors provided only minimal CAM reporting, the proposed standard would have limited impact (PCAOB 2011b). In the Short CAM condition, participants were provided with the auditor's brief discussion of the CAM in the audit report. The discussion was limited to the minimum information necessary to comply with the proposed standard -- identification of the matter and a brief discussion of why the matter was selected as a CAM. In the Long CAM condition, participants were provided with

¹² The manipulation of audit committee expertise within the *AC Strength* manipulation is borrowed with permission directly from Agoglia et al. 2011, for which I am grateful.

the auditor's detailed discussion of the CAM in the audit report. The Long CAM condition included the information in the Short CAM condition plus a richer qualitative description of the uncertainties encompassed in the matter and the potential future implications.¹³

Experimental Materials and Task

The experimental materials involved a financial reporting disclosure scenario. Participants were asked to assume the role of CFO for a hypothetical public company named Andarex Corp. which has traditionally manufactured high-end consumer products. Andarex has been public for 10 years and has consistently met its revenue and earnings growth targets. Andarex has a history of unqualified opinions on financial reporting and internal controls. Participants were informed that Andarex's auditors will be following a new PCAOB regulation that requires them to report on critical audit matters to highlight the audit and financial reporting issues of greatest significance. Participants were then told they would be asked to consider only one audit issue -- warranty exposure Andarex has for a newly launched product -- for which the auditor was considering treatment as a CAM.¹⁴

In the most recent year, Andarex launched a new product to a completely different, cost-conscious consumer segment. As a result, Andarex management was confronted with the difficult task of estimating its warranty exposure for the new product given its different warranty terms and customer base for the product. Participants received a detailed warranty calculation setting forth various assumptions including a significant element of uncertainty in the estimate related to what percentage of customers would likely file a claim in the event of a defective

¹³ In order to hold information constant across all conditions, the qualitative information included in the Long CAM condition was included for all conditions within a discussion of the auditor's decision.

¹⁴ I selected a warranty task as it is a fundamental accounting task that is widely understood by professionals with accounting experience and education (Perreault and Kida 2011).

product. The warranty estimate ranged from a minimum of \$520,000 before taxes to a maximum of \$1.56 million, the difference of which is material to Andarex's earnings. Andarex decided to record the minimum amount of the range until such time as it has more history with regard to the assumptions in the estimate.

After reviewing the case materials including a detailed discussion of the warranty estimate as well as the auditor's decision whether or not to treat the warranty issue as a CAM, participants rated the extent of disclosure they would choose to make about the warranty estimate as well as the likelihood that they would disclose different elements of information related to the warranty issue in Andarex's financial reporting.¹⁵

Dependent Variables

I collected one primary dependent variable and six secondary dependent variables from participants in the study. The primary dependent variable was a measurement of the *Extent of Disclosure* that the participant would provide for the warranty estimate on a 10-point Likert scale where 1 = minimal disclosure and 10 = extensive disclosure. I interpret increases in *Extent of Disclosure* as increases in the *amount* of information participants would communicate in their financial disclosure. I contend that increases in *Extent of Disclosure* correspond with increases in disclosure quality as users have more information on which to base their decisions. I treat *Extent of Disclosure* as my primary dependent variable as it is important to obtain an overall measure of participants' intention with regard to how much information will be disclosed.

¹⁵ As part of instrument development, I met with three current or former chief financial officers to review all aspects of the case materials and post-experimental questionnaire. In each meeting, I had the professional read the instrument from beginning to end stopping between sections to discuss comprehensibility and realism of the materials, language used and questions. Prior to finalizing the instrument, I made revisions based on feedback received from the professionals to ensure the maximum comprehensibility and realism of the instrument.

Participants next considered six individual disclosure elements that could be included in the disclosure of Andarex's warranty exposure issue. I collect these ratings in order to perform further analysis of the different elements of information that managers might be more likely to include as *Extent of Disclosure* increases. Each disclosure element was rated on a 10-point Likert scale where 1 = Definitely Not Disclose and 10 = Definitely Disclose.¹⁶ Certain of the disclosure elements represent quantitative information that could enhance the financial statement user's ability to quantify the risk in a critical accounting estimate. These elements include (i) the range of the warranty estimate (*RANGE*); a description of the key uncertain assumption in the estimate (*KEY ASSUMPTION*); and (iii) a sensitivity analysis of the warranty estimate (*SENSITIVITY*). While disclosures of this type are generally required by current SEC regulations, many stakeholders have pointed to a lack of compliance in this area (PCAOB 2011b). Other disclosure elements collected are more commonplace in current practice including (i) the amounts reported in the financial statements (*FS AMOUNT*); (ii) the rationale for the recorded amount (*RATIONALE*); and (iii) a description of uncertainty in the estimate (*UNCERTAINTY*).¹⁷ A concrete example of each disclosure element (see Appendix C) was provided before the rating was elicited.

Procedures

¹⁶ Since I contend that each of the disclosure elements I measure is necessary for a complete disclosure of the critical accounting estimate (see note 17), I interpret an increase in the likelihood of management disclosure of each element as an increase in the quality of the firm's overall disclosure of the critical accounting estimate.

¹⁷ Taken together, I contend that disclosure of all six elements would result in a rich disclosure of the critical accounting estimate more in line with the SEC regulations (SEC 2003). It is likely that management has differing sensitivities to disclosure of these elements. For example, management is likely to be highly sensitive to the disclosure of the range of the warranty estimate, description of the key assumptions in the estimate and sensitivity analysis of the estimate. Disclosure of the amount of warranty expense and warranty accrual in the financial statements or the qualitative uncertainty surrounding the estimate is commonplace and managers are less likely to be sensitive to disclosure of these elements.

The experimental materials were divided into two packets.¹⁸ Packet 1 included an introduction to the experiment and information regarding the company, its audit committee and the audit currently underway. Participants were then informed of the auditor's decision whether or not to report Andarex's warranty issue as a CAM. Finally, a detailed discussion of the warranty reserve issue was provided. Participants then provided their disclosure ratings, based on their knowledge of the case materials including the auditor's decision regarding the level of CAM reporting, if any, they intend to provide for the warranty reserve. Participants were instructed to complete Packet 1 before proceeding to Packet 2. Packet 2 was a post-experimental questionnaire which included manipulation checks, questions about the experiment and participant judgments, and demographic information. Participants were told not to refer back to Packet 1. The flow of the experiment is summarized in Figure 2.

[Insert Figure 2 here]

IV. RESULTS

Manipulation Checks

To test whether the *AC Strength* manipulation was effective, I collected participant ratings of the audit committee's accounting/financial expertise (Agoglia et al. 2011) and its involvement in financial reporting decisions. Participants rated each measure on a 7-point Likert scale where 1 = Low and 7 = High (Agoglia et al. 2011).¹⁹ Participants in the strong *AC Strength* condition rated the audit committee's accounting/financial expertise as significantly higher than

¹⁸ Approval of the experimental design and materials was received from the Institutional Review Board of my university prior to conducting the experiment.

¹⁹ Two of the 139 participants failed to provide one or both of the *AC Strength* ratings and are excluded from the manipulation check tests.

participants in the moderate *AC Strength* condition (6.04 versus 2.97, $t_{136}=15.06$, $p<.001$, two-tailed). Participants in the strong *AC Strength* condition also rated the audit committee's involvement in financial reporting issues as significantly higher than participants in the moderate *AC Strength* condition (5.80 versus 3.15, $t_{135}=10.89$, $p<.001$, two-tailed). These ratings provide evidence of an effective manipulation of *AC Strength*.

To test the effectiveness of my *Auditor Reporting Choice* manipulation, I performed two tests. First, all participants were asked whether the auditor decided to report Andarex's warranty issue as a CAM. Of the 145 participants, 139 (95.9%) correctly recalled the auditor's choice regarding the CAM.²⁰ Next, I tested the effectiveness of the manipulation of *Auditor Reporting Choice* between the short CAM and Long CAM conditions by comparing how participants rated the informativeness of the CAM discussion provided by the auditor. Participants in the No CAM condition are excluded from this test since there was no CAM discussion provided by the auditor. Participants rated how informative the auditor's CAM reporting was on a 7-point Likert scale where 1 = Not at all Informative and 7 = Very Informative. Participants in the Long CAM condition rated the auditor's CAM reporting as significantly more informative²¹ than in the Short CAM condition (4.67 versus 3.89, $t_{91}=2.78$, $p<.01$, two-tailed). Collectively, these results provide evidence of an effective manipulation of *Auditor Reporting Choice*.

Primary Results

²⁰ Of the six remaining participants, four answered the question incorrectly and two failed to answer the question. Given the importance of the *Auditor Reporting Choice* manipulation, these six participants are excluded from the results reported in the remainder of this study. Including these participants in the results, in limited cases, would have minor impacts on the level of statistical significance of findings but would not qualitatively change the inferences drawn in the study.

²¹ Of the 95 participants in the Short CAM and Long CAM conditions, 3 failed to answer the question and are excluded from the manipulation check tests.

In order to test my hypotheses, I conducted a series of ANOVAs of *AC Strength* and *Auditor Reporting Choice* on *Extent of Disclosure*. Each ANOVA is a comparison of two levels of *Auditor Reporting Choice* in order to determine specific effects of the various levels of detail in CAM reporting.²² For each of the comparisons, I first test the interaction predicted in H2. Since the main effect of *Auditor Reporting Choice* predicted in H1 is dependent on *AC Strength*, I then test H1 using simple effects analysis. I first compared the No CAM control and Long CAM conditions. This is the starkest comparison which allows me to investigate the maximum effect of a Long CAM discussion by the auditor on management's disclosure decisions. The results for this comparison are presented in Figure 3 and Table 2. The ANOVA reveals a significant interaction of *Auditor Reporting Choice* and *AC Strength* ($F_{1,88}=2.829$, $p=.048$, one-tailed).²³ The ANOVA also reveals a significant main effect of *AC Strength* on *Extent of Disclosure* ($F_{1,88}=9.521$, $p=.002$). Simple effects analysis reveals that when *AC Strength* is strong, the *Extent of Disclosure* provided by the manager is significantly greater ($F_{1,46}=5.279$, $p=.026$) in the Long CAM condition ($\bar{x}=8.08$) than in the No CAM condition ($\bar{x}=6.95$). When *AC Strength* is only moderate, the *Extent of Disclosure* provided by the manager is no greater ($F_{1,42}=.078$, $p=.782$) in the Long CAM condition ($\bar{x}=6.25$) than in the No CAM condition ($\bar{x}=6.42$). These results provide evidence that managers will respond to the auditor shining a spotlight on a highly uncertain critical accounting estimate by increasing their own disclosure of the matter and that this effect is strongest when audit committee oversight is strong.

[Insert Table 2 and Figure 3 here]

²² One of the 139 participants did not provide an *Extent of Disclosure* rating, the primary dependent variable. This participant is excluded from all results for *Extent of Disclosure*.

²³ To provide further evidence of the predicted interaction, I conducted a planned contrast of the effect of *Auditor Reporting Choice* and *AC Strength* on *Extent of Disclosure* (Buckless and Ravenscroft 1990). As expected, results of the planned contrast reported in Table 3, Panel C were significant ($t_{88}=3.62$, $p<.001$, one-tailed).

Next, I compared the Short CAM and long CAM conditions to investigate whether the *level of detail* in the discussion provided for the CAM affects the manager's *Extent of Disclosure* decision. Results of the comparison are presented in Figure 4 and Table 3. The interaction of *Auditor Reporting Choice* and *AC Strength* is significant ($F_{1, 88}=11.771, p=.001$, one-tailed).²⁴ Simple effects analysis reveals that when *AC Strength* is strong, the *Extent of Disclosure* provided by the manager is significantly greater ($F_{1, 47}=8.005, p=.007$) in the Long CAM condition ($\bar{x}=8.08$) than in the Short CAM condition ($\bar{x}=6.70$). When *AC Strength* is only moderate, the *Extent of Disclosure* provided by the manager in the Long CAM condition ($\bar{x}=6.25$) is actually significantly lower ($F_{1, 41}=4.311, p=.044$) than in the Short CAM condition ($\bar{x}=7.48$).²⁵ Collectively, these results suggest that the *level of detail* provided in the auditor's CAM discussion is an important determinant of the manager's disclosure choice regarding the matter and, when audit committee oversight is strong, greater detail in the auditor's CAM discussion is likely to lead to greater disclosure by management.

[Insert Table 3 and Figure 4 here]

Finally, I compared the No CAM control and Short CAM conditions to determine whether the auditor *merely identifying* the warranty estimate issue as a CAM and providing a brief discussion in the audit report would impact manager disclosure decisions. Results of the

²⁴ To provide further evidence of the predicted interaction, I conducted a planned contrast of the effect of *Auditor Reporting Choice* and *AC Strength* on *Extent of Disclosure*. As expected, results of the planned contrast reported in Table 3, Panel C were significant ($t_{88}=2.00, p=.024$, one-tailed).

²⁵ This result should be interpreted with caution as it may be an anomaly. Recall that along with this *Extent of Disclosure* rating, I also collected individual ratings for six disclosure elements. Comparison between the Short CAM and Long CAM conditions for these disclosure element ratings as well as the mean of all disclosure element ratings is presented in Table 5. The decrease in *Extent of Disclosure* between the Short CAM and Long CAM conditions when audit committee oversight is only moderate is not seen in the *likelihood to disclose* ratings for any of the disclosure elements or the mean of all ratings. So, it would seem that while participants in the Short CAM/Moderate AC condition favored a higher *Extent of Disclosure* than participants in the Long CAM/Moderate AC condition, this did not translate to them being more likely to disclose any of the individual elements.

comparison are reported in Figure 5 and Table 4. The interaction of *Auditor Reporting Choice* and *AC Strength* was marginally significant ($F_{1, 88}=3.321$, $p=.072$, two-tailed) but not in the pattern predicted by theory.^{26, 27} Simple effects analysis reveals that when *AC Strength* is strong, the *Extent of Disclosure* provided by the manager is no different ($F_{1, 43}=.239$, $p=.628$) in the Short CAM condition ($\bar{x}=6.79$) from the No CAM condition ($\bar{x}=6.95$). When *AC Strength* is only moderate, the *Extent of Disclosure* provided by the manager in the Short CAM condition ($\bar{x}=7.48$) is significantly greater ($F_{1, 45}=4.597$, $p=.037$) than in the No CAM condition ($\bar{x}=6.42$).²⁸ Collectively, these results suggest that if the auditor only provides minimal detail in its CAM reporting, disclosure by the manager might not be affected.

[Insert Table 4 and Figure 5 here]

Supplemental Analysis

Management has to make a wide variety of decisions regarding what they feel is important to disclose. Recall that I identified six disclosure elements that collectively would make up a comprehensive disclosure of the critical accounting estimate. To gain further insight on management disclosure choices, I analyzed participant ratings of the likelihood that they would choose to disclose each item. Results of the disclosure element ratings are reported in

²⁶ I used two-tailed tests for this ANOVA because the pattern of results was inconsistent with my theory.

²⁷ As an additional test of the predicted interaction, I conducted a planned contrast of the effect of *Auditor Reporting Choice* and *AC Strength* on *Extent of Disclosure*. Results of the planned contrast reported in Table 5, Panel C were not significant ($t_{88}=-.238$, $p=.812$, two-tailed).

²⁸ Once again, this result should be interpreted with caution as it may be an anomaly related to the same participant ratings of *Extent of Disclosure* for the Short CAM/Moderate AC condition discussed in footnote 25. As before, I compared the individual disclosure element ratings as well as the mean of all disclosure element ratings between the Short CAM and No CAM conditions presented in Table 5. The increase in *Extent of Disclosure* between the No CAM and Short CAM conditions when audit committee oversight is only moderate is not seen in the *likelihood to disclose* ratings for any of the disclosure elements or the mean of all ratings. So, it would seem that while participants in the Short CAM/ Moderate AC condition favored a higher *Extent of Disclosure* than participants in the No CAM/Moderate AC condition, this did not translate to them being more likely to disclose any of the individual elements.

Table 5²⁹. For each disclosure element in each comparison (No CAM vs Long CAM, Short CAM vs Long CAM, and No CAM vs Short CAM), I conducted planned contrasts with weightings identical to the planned contrasts for *Extent of Disclosure* described in the primary analysis. In other words, I am testing whether participants increase the likelihood that they would disclose the element in response to an increase in the level of the auditor's CAM reporting and whether that increase in likelihood is greater in the presence of stronger audit committee oversight.

Several elements of disclosure stand out in the analysis. Most notable are three elements of disclosure, each of which provide quantitative information that would enhance the financial statement user's ability to quantify the risk in the warranty estimate. Specifically, participants' ratings of the likelihood that they would disclose the *RANGE* of the warranty estimate, the *KEY ASSUMPTION* used in the estimate, and a *SENSITIVITY* analysis of the warranty estimate each followed the general pattern of results predicted.³⁰

In the comparison of the No CAM and Long CAM conditions, *RANGE*, *KEY ASSUMPTION*, and *SENSITIVITY* were all significant (all p 's < .05, one-tailed). In the comparison of the Short CAM and Long CAM conditions, *KEY ASSUMPTION* and *SENSITIVITY* were significant (all p 's < .05, one-tailed). In each of these CAM comparisons, the

²⁹ As discussed in Note 11, despite random assignment of potential participants to treatment conditions, there were differences in gender by cell. To assess these differences, I analyzed the proportion of each gender by cell for each of the CAM comparisons used throughout the study. GENDER was only significantly different for the No CAM vs Short CAM comparison ($X^2_3 = 8.481, p = .037$). GENDER was not significantly different in the No CAM vs Long CAM comparison ($X^2_3 = 5.079, p = .166$) or the Short CAM vs Long CAM comparison ($X^2_3 = 4.250, p = .236$). To determine whether GENDER had an effect on the No CAM vs Short CAM disclosure element ratings reported in Table 5, I ran ANCOVAs of *Auditor Reporting Choice* and *AC Strength* on each of the disclosure element ratings with GENDER as a covariate. In all ANCOVAs, the GENDER term was not significant (all p 's > .133).

³⁰ This is particularly noteworthy in light of the fact that even in the Long CAM condition, the auditor's discussion did not include any specific quantitative information regarding the warranty estimate. This was an intentional design choice to avoid the manager's decision to disclose being a foregone conclusion if the auditor provided such information in their own CAM discussion of the warranty estimate.

quantitative disclosure elements were rated as most likely to be disclosed in the Long CAM/Strong AC condition. This finding is of particular importance as these quantitative disclosure elements are the type of information frequently cited as lacking in management disclosure (PCAOB 2011b) and is consistent with participants increasing the *Extent of Disclosure* as discussed in the primary results.

In the comparison of the No CAM and Short CAM conditions, none of the planned contrasts for *RANGE*, *KEY ASSUMPTION*, or *SENSITIVITY* disclosure elements were found to be significant (all p 's $>.63$, two-tailed.). A closer review of the results reveals that there is no discernible pattern wherein minimal auditor CAM reporting leads to greater manager disclosure than if the auditor chooses not to report the matter as a CAM, regardless of the audit committee oversight strength. Importantly, this finding provides support for investor and regulator concerns that minimal CAM reporting will not lead to meaningful improvement in manager disclosure.

In all of the comparisons, Elements of disclosure that do not reveal quantitative risk in the warranty estimate do not follow the pattern of results predicted in Hypothesis 2. Specifically, participant ratings of the likelihood that they would disclose (i) the *FS AMOUNT* of the warranty estimate actually recorded in the financial statements; and (ii) a qualitative description of *UNCERTAINTY* in the estimate each did not conform to the predicted pattern of results (all p 's $>.32$, one-tailed except the comparison of No CAM and Short CAM which is two-tailed). This finding is not unexpected because disclosure of this type of information is already commonplace. There was also no significant result for *RATIONALE*, which might be due to the fact that it did not communicate much incremental information beyond that in the other disclosure elements.

[Insert Table 5 here]

V. CONCLUSION

This study investigates whether the current changes proposed by the PCAOB to the auditor's reporting model are likely to spur management to provide enhanced disclosure that investors are demanding about areas of uncertainty in the financial statements. According to Martin Baumann, Chief Auditor of the PCAOB, the proposed standard is among initiatives that "would make very significant changes to the auditor's report for the first time in some 75 years" (PCAOB 2014). Thus, it is important to all stakeholders in the financial reporting process to develop an *ex ante* understanding of how proposed changes might affect financial reporting and disclosure quality (Maines 1994; Beresford 1997).

To study the effects of the proposed standard, I conducted an experiment involving highly experienced public company financial executives, primarily chief financial officers. The extensive experience of the participant group was critical given the importance of obtaining reliable insights on the proposal. Participants rated the extent of disclosure they would be likely to give for a highly uncertain critical accounting estimate. In addition, they rated the likelihood that they would disclose a variety of disclosure elements related to the critical accounting estimate. The experiment varied how the auditor treated the critical accounting estimate in their audit report as well as the strength of the audit committee's oversight over financial reporting.

Results of the experiment provide a number of important insights into the potential effect of the proposed change to the auditor's reporting model. I find that managers will react to detailed auditor reporting of a CAM by increasing their own disclosure of the matter including quantitative information which could enhance the financial statement user's ability to quantify the risk in a critical accounting estimate. In addition, I find that the level of detail provided by the auditor in its CAM reporting plays an important role in determining the extent of disclosure the manager chooses to make. Finally, despite concerns about the diminished role of the audit

committee should the proposed standard be adopted, I find that the audit committee is likely to continue to be a key source of accountability playing a pivotal role in the effectiveness of the auditor's reporting model changes.

There are limitations to the study which represent opportunities for future research. In order to gain initial insights on the effect of the proposed standard on manager disclosure decisions, my experimental setting was an intentionally simple one in which the auditor makes an independent decision whether or not to report a CAM and what level of detail to provide. Furthermore, my design intentionally avoided the prospect of the auditor discussing specific quantitative information about the critical accounting estimate in its CAM reporting in order to allow managers to make unconstrained decisions whether or not to disclose the information themselves. In reality, the process is likely to follow a more iterative structure akin to the auditor-client negotiation process of resolving audit adjustments (Gibbins, Salterio, and Webb 2001, Sanchez, Agoglia, and Hatfield 2007). On one hand, auditors are likely to signal their preferences for disclosure to clients in the hopes that disclosure will meet their preferences. On the other hand, clients are likely to seek compromise with auditors on the minimum level of disclosure the auditor will accept without needing to disclose original information about the company in its CAM reporting. This auditor-client interaction represents a fruitful area for future research.

The study has important implications for the various stakeholders to the PCAOB project on the auditor's reporting model as well as academic research. First, in order to pursue their objective of providing greater information to the markets, it is critical for regulators to continue to emphasize the importance of auditors providing more than cursory discussion of CAMs in their audit report. The study confirms fears raised by many that minimal discussion of CAMs by

auditors in their report is unlikely to lead managers to provide disclosure about uncertainty in the financial statements that investors are demanding. Next, the quality of audit committee oversight is likely to have an effect on how managers react to enhancements of the auditor report under the proposed standard. Strong audit committee oversight will be needed for the full benefits of the proposed standard to be reaped by investors. Finally, the study extends the accounting literature regarding the effect of regulatory changes on financial reporting quality. Most of the concurrent studies on the proposed standard focus on financial stakeholders other than management such as auditors and investors. Many of these studies, as a necessary part of their design, presume that the manager does not react to enhancements in the audit report. The results of this study suggest that if proposed regulatory change is implemented correctly and corporate governance is strong, higher quality financial reporting by management will more likely be forthcoming.

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Appendix A – Audit Committee Description³¹

All conditions received the following general information regarding the Audit Committee:

Andarex’s audit committee is responsible for overseeing the financial reporting process, including a review of the company’s financial statements and disclosures. The audit committee meets about eight times a year and is made up of three members, all of whom satisfy the independence criteria for audit committee members. In addition:

The following additional information about the audit committee and its oversight constitute the *AC Strength* manipulation:

Moderate Audit Committee Oversight condition

- **Only one of the members qualifies as an “audit committee financial expert,”** as prescribed by the SEC, and is viewed as a supervisory financial expert. That is, this is an individual with an understanding of financial reporting but no direct accounting or financial reporting experience. While this individual qualifies as an audit committee financial expert, **none of the members has any direct accounting or financial reporting experience.**
- The audit committee **is somewhat involved** in the resolution of key accounting and disclosure issues. Audit committee members **are reactive**; they **follow discussions of the issues** during meetings **but they do not ask too many questions** regarding these issues.

Strong Audit Committee Oversight condition

- **All of the members qualify as “audit committee financial experts,”** as prescribed by the SEC, and are viewed as accounting financial experts. That is, these are individuals with an understanding of financial reporting and direct accounting or financial reporting experience.
- The audit committee **is actively involved** in the resolution of key accounting and disclosure issues. Audit committee members **are proactive**; they **lead discussion of issues** during meetings, **often ask probing questions**, and **debate the appropriate accounting treatment** regarding key transactions/issues.

Appendix B – Auditor Reporting Choice³²

³¹ Significant portions of the Audit Committee Description in my instrument, most importantly the description of the audit committee’s expertise and part of the introduction, are borrowed with permission directly from Agoglia et al. 2011, for which I am grateful.

No CAM condition (received the following paragraph and no CAM excerpt of the audit report)

After careful consideration, in their best judgment, the auditors have decided **it is not necessary** to include a discussion of the warranty exposure related to its new product offering as a Critical Audit Matter in its audit report.

Short CAM and Long CAM Conditions (received the following paragraph plus the applicable excerpt of the audit report)

After careful consideration, in their best judgment, the auditors have decided **it is necessary** to include a discussion of the warranty exposure related to Andarex's new product offering as a Critical Audit Matter in its audit report. Following is the language that the auditor intends to use to address the warranty exposure issue in its audit report:

Excerpt of Audit Report

Critical Audit Matter (Long CAM condition)

The Company has potential warranty obligations associated with a new product launched during 2012. The Company is required to estimate the exposure and record a Warranty Liability and associated Warranty Expense in the Consolidated Balance Sheet and Income Statement as of and for the year ended December 31, 2012, respectively. Management's estimate of the warranty exposure incorporates subjective assumptions that have a high degree of uncertainty. In particular, the percentage of Andarex's customers with a defective unit that will actually file a warranty claim could be much higher than the Company estimated. The Company recorded the warranty liability at the lower end of the estimate range. Consequently, actual warranty expenses to be incurred could be significantly higher and earnings could be significantly lower than the amount recorded.

Critical Audit Matter (Short CAM condition)

The Company has potential warranty obligations associated with a new product launched during 2012. The Company is required to estimate the exposure and record a Warranty Liability and associated Warranty Expense in the Consolidated Balance Sheet and Income Statement as of and for the year ended December 31, 2012, respectively. Management's estimate of the warranty exposure incorporates several subjective assumptions that have a high degree of uncertainty.

³² In order to hold information constant across all conditions, the qualitative information included in the Long CAM audit report excerpt was included for all conditions within a discussion of the auditor's decision.

Appendix C – Examples of Disclosure Elements

FS AMOUNT

The Company has recorded a warranty accrual and related warranty expense of \$520,000 for Product B in the Consolidated Balance Sheet and Statement of Income as of and for the year ended December 31, 2012, respectively.

RANGE

The Company calculated the potential warranty exposure associated with Product B and estimates that the exposure is between a minimum of \$520,000 and a maximum of \$1,560,000 as of December 31, 2012. The Company recorded warranty expense and reserve for the minimum amount of the potential exposure range (\$520,000) as of December 31, 2012.

RATIONALE

The Company has decided to record warranty expense and reserve for the minimum amount of the potential exposure range (\$520,000) as of December 31, 2012 until the Company has more experience with actual claims and costs.

KEY ASSUMPTION

The Company's estimate of warranty exposure is based on a key assumption. Specifically, the Company has estimated a range for the likelihood that a customer with a defective unit will actually file a warranty claim of between 20% and 60%.

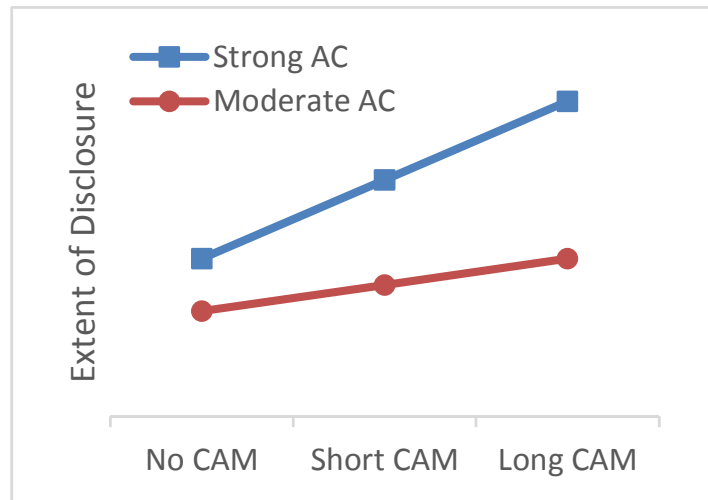
UNCERTAINTY

The Company's estimate of warranty exposure for Product B incorporates a subjective assumption that has a high degree of uncertainty. Specifically, the customer segment for Product B is new to the Company and it is difficult to estimate the likelihood that a customer with a defective unit will actually file a warranty claim. Actual warranty expenses to be incurred could be significantly higher than the amount recorded in the financial statements.

SENSITIVITY

The estimate of warranty exposure depends on the Company's estimate of the likelihood that a customer with a defective unit will actually file a warranty claim, which ranges from 20% to 60%. The warranty accrual recorded by the Company is based on a 20% claims rate. Each increase of 10% in the claims rate would result in additional warranty expense of \$260,000 before income taxes.

Figure 1 – Predicted Pattern of Results – Rating of Extent of Disclosure^a by Audit Committee Oversight Strength^b and Auditor Reporting Choice^c



^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^cAuditor Reporting Choice was varied at three levels. The auditor provided either no CAM discussion (No CAM), a short CAM discussion (Short CAM), or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

Figure 2 – Flow of Experiment

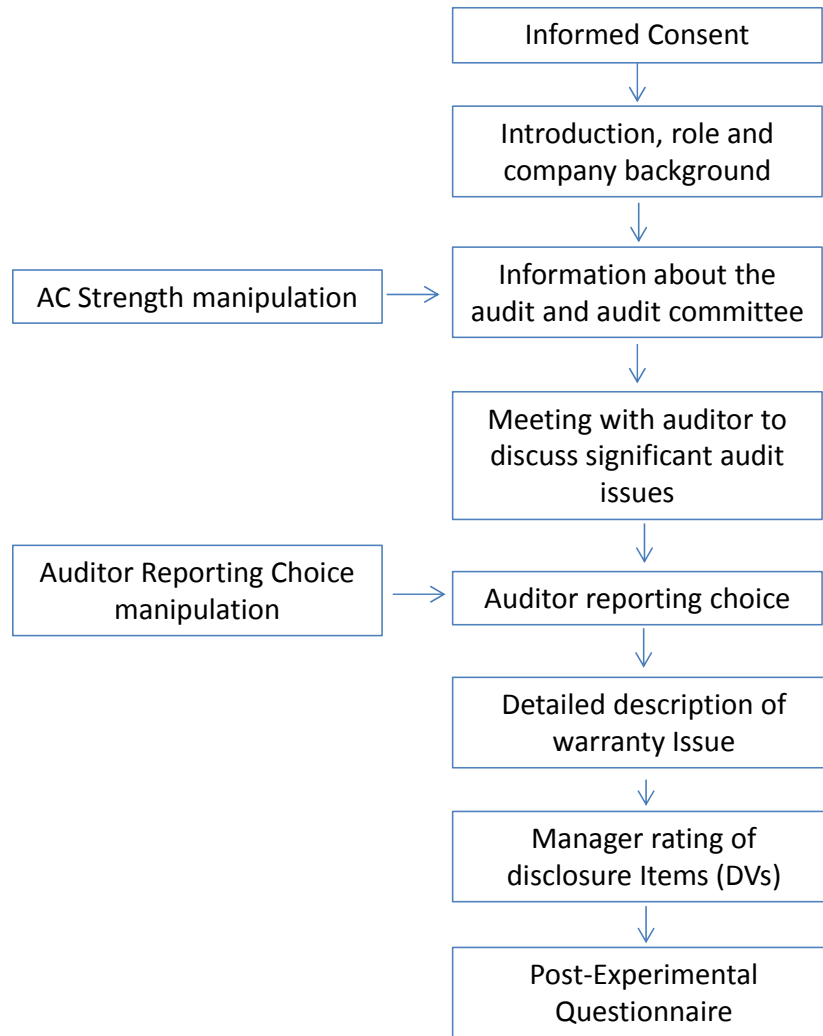
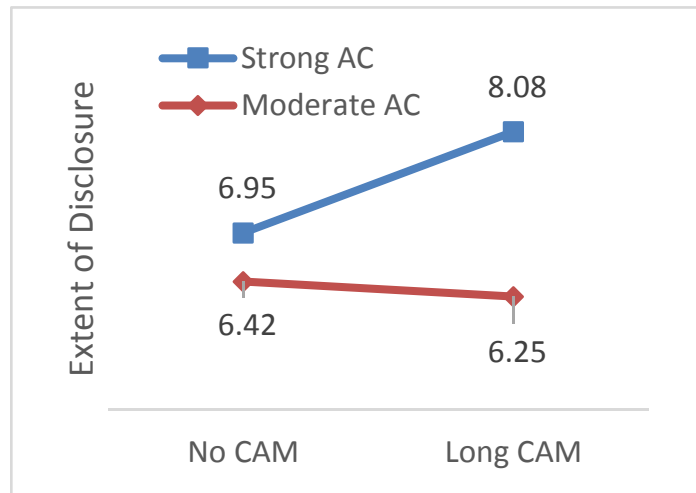


Figure 3 – Rating of Extent of Disclosure^a by Audit Committee Oversight Strength^b and Auditor Reporting Choice^c – Comparison of No CAM and Long CAM conditions

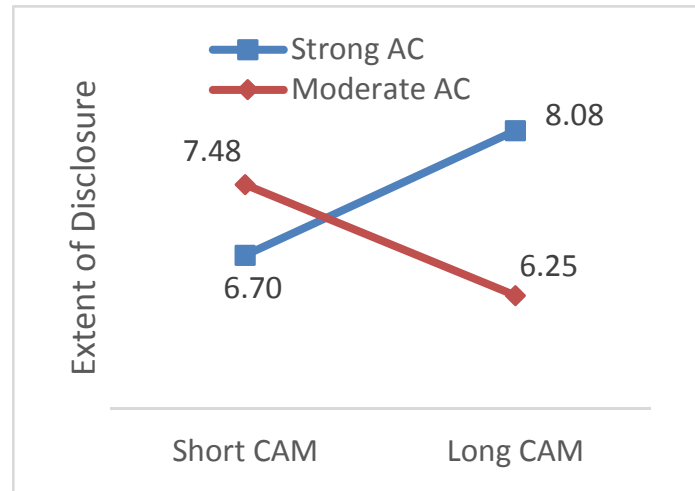


^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^cAuditor Reporting Choice was either no CAM discussion (No CAM) or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

Figure 4 – Rating of Extent of Disclosure^a by Audit Committee Oversight Strength^b and Auditor Reporting Choice^c – Comparison of Short CAM and Long CAM Conditions

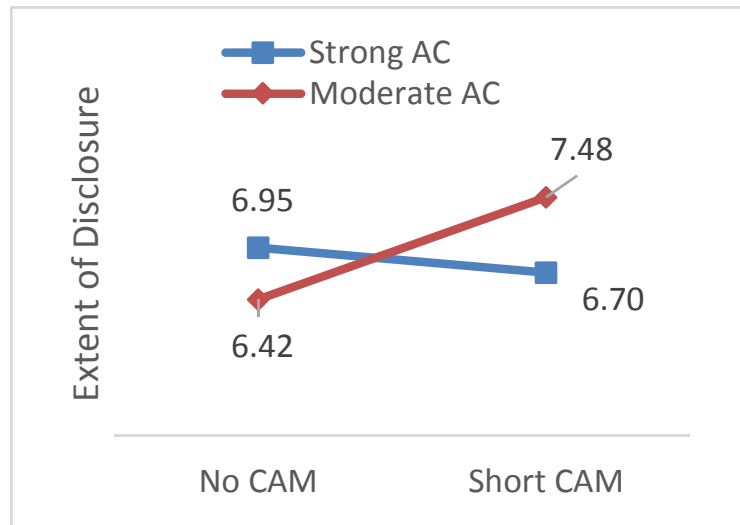


^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^cAuditor Reporting Choice was either a short CAM discussion (Short CAM) or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

Figure 5 – Rating of Extent of Disclosure^a by Audit Committee Oversight Strength^b and Auditor Reporting Choice^c – Comparison of No CAM and Short CAM conditions



^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^cAuditor Reporting Choice was either no CAM discussion (No CAM) or a short CAM discussion (Short CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

Table 1 – Demographic Information

Years of Work Experience	29.2 years
Has Experience as Auditor	71.2%
Current or Former Audit Committee Member	24.5%
Current or Former CPA	73.4%
Age	54.0 years
Gender	89.1% Male 10.9% Female

Table 2 – Rating of Extent of Disclosure – Comparison of No CAM and Long CAM conditions

Panel A: Mean (standard deviation) Ratings of Extent of Disclosure^a by Audit Committee Oversight Strength and Auditor Reporting Choice

		AUDITOR REPORTING CHOICE ^b		Overall
		No CAM	Long CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH ^c	STRONG	6.95 (1.76) n = 22	8.08 (1.62) n = 26	7.56 (1.76) n = 48
	MODERATE	6.42 (1.74) n = 24	6.25 (2.22) n = 20	6.34 (1.95) n = 44
Overall		6.67 (1.75) n = 46	7.28 (2.09) n = 46	

Panel B: ANOVA results for Ratings of Extent of Disclosure

<u>Source of Variation</u>	<u>df</u>	<u>SS</u>	<u>F-Value</u>	<u>p-value (1-tailed)</u>
Audit Committee Oversight Strength	1	31.850	9.521	.002
Auditor Reporting Choice	1	5.202	1.555	.108
Audit Committee Oversight Strength X Auditor Reporting Choice	1	9.464	2.829	.048

Panel C: Planned Contrast for Test of Effect of Auditor Reporting Choice and Audit Committee Oversight Strength on Ratings of Extent of Disclosure

	<u>t-statistic</u>	<u>p-value (1-tailed)</u>
Model contrast ^d	3.623	.000

^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAuditor Reporting Choice was either no CAM discussion (No CAM) or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

^cAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^dContrast coefficients were -1 for Strong AC/No CAM, +5 for Strong AC/Long CAM, -3 for Moderate AC/No CAM, and -1 for Moderate AC/Long CAM.

Table 3 – Rating of Extent of Disclosure – Comparison of Short CAM and Long CAM conditions

Panel A: Mean (standard deviation) Ratings of Extent of Disclosure^a by Audit Committee Oversight Strength and Auditor Reporting Choice

		AUDITOR REPORTING CHOICE ^b		Overall
		Short CAM	Long CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH ^c	STRONG	6.70 (1.80) n = 23	8.08 (1.62) n = 26	7.43 (1.83) n = 49
	MODERATE	7.48 (1.65) n = 23	6.25 (2.22) n = 20	6.91 (2.01) n = 43
Overall		7.09 (1.75) n = 46	7.28 (2.09) n = 46	

Panel B: ANOVA results for Ratings of Extent of Disclosure

<u>Source of Variation</u>	<u>df</u>	<u>SS</u>	<u>F-Value</u>	<u>p-value (1-tailed)</u>
Audit Committee Oversight Strength	1	6.217	1.885	.087
Auditor Reporting Choice	1	0.133	0.040	.421
Audit Committee Oversight Strength X Auditor Reporting Choice	1	38.820	11.771	.001

Panel C: Planned Contrast for Test of Effect of Auditor Reporting Choice and Audit Committee Oversight Strength on Ratings of Extent of Disclosure

	<u>t-statistic</u>	<u>p-value (1-tailed)</u>
Model contrast ^d	2.004	.024

^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAuditor Reporting Choice was either a short CAM discussion (Short CAM) or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition

^cAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^dContrast coefficients were +1 for Strong AC/Short CAM, +4 for Strong AC/Long CAM, -3 for Moderate AC/Short CAM, and -2 for Moderate AC/Long CAM.

Table 4 – Rating of Extent of Disclosure – Comparison of No CAM and Short CAM conditions

Panel A: Mean (standard deviation) Ratings of Extent of Disclosure^a by Audit Committee Oversight Strength and Auditor Reporting Choice

		AUDITOR REPORTING CHOICE ^b		Overall
		No CAM	Short CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH ^c	STRONG	6.95 (1.76) n = 22	6.70 (1.80) n = 23	6.82 (1.76) n = 45
	MODERATE	6.42 (1.74) n = 24	7.48 (1.65) n = 23	6.94 (1.76) n = 47
Overall		6.67 (1.75) n = 46	7.09 (1.75) n = 46	

Panel B: ANOVA results for Ratings of Extent of Disclosure

<u>Source of Variation</u>	<u>df</u>	<u>SS</u>	<u>F-Value</u>	<u>p-value (2-tailed)</u>
Audit Committee Oversight Strength	1	.344	.114	.736
Auditor Reporting Choice	1	3.701	1.227	.271
Audit Committee Oversight Strength X Auditor Reporting Choice	1	10.017	3.321	.072

Panel C: Planned Contrast for Test of Effect of Auditor Reporting Choice and Audit Committee Oversight Strength on Ratings of Extent of Disclosure

	<u>t-statistic</u>	<u>p-value (2-tailed)</u>
Model contrast ^d	-0.238	.812

^aExtent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

^bAuditor Reporting Choice was either no CAM discussion (No CAM) or a short CAM discussion (Short CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

^cAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^dContrast coefficients were +1 for Strong AC/No CAM, +4 for Strong AC/Short CAM, -3 for Moderate AC/No CAM, and -2 for Moderate AC/Short CAM.

Table 5 – Summary of Disclosure Element Ratings – Comparison of CAM conditions

Disclosure Element	AC Strength ^a	No CAM ^b	Short CAM ^b	Long CAM ^b	No CAM vs Short CAM contrast p-value ^j (2-tailed)	No CAM vs Long CAM contrast p-value ^k (1-tailed)	Long CAM vs Short CAM contrast p-value ^l (1-tailed)
FS Amount ^c	Strong	7.55	7.75	8.15	.676	.320	.387
	Moderate	7.96	8.00	7.75			
Range ^d	Strong	4.27	4.29	6.00	.629	.040	.119
	Moderate	4.54	4.83	4.65			
Rationale ^e	Strong	4.32	3.92	5.69	.317	.144	.225
	Moderate	4.88	4.52	5.15			
Key Assumption ^f	Strong	4.14	4.46	6.27	.912	.003	.020
	Moderate	4.21	4.48	4.50			
Uncertainty ^g	Strong	8.23	7.71	8.08	.753	.362	.372
	Moderate	7.75	8.35	7.90			
Sensitivity ^h	Strong	5.00	4.54	6.25	.944	.032	.001
	Moderate	5.33	3.70	3.80			
Mean of Elements ⁱ	Strong	5.58	5.44	6.74	.550	.014	.026
	Moderate	5.78	5.64	5.63			

Each of the six elements were rated by participants based on the likelihood they would choose to disclose the element. Ratings were given on a 10-point scale where 1 = Definitely Not Disclose and 10 = Definitely Disclose.

^aAudit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

^bAuditor Reporting Choice was varied at three levels. The auditor provided either no CAM discussion (No CAM), a short CAM discussion (Short CAM), or a long CAM discussion (Long CAM) of a critical accounting estimate with significant uncertainty. See Appendix B for excerpts for each condition.

^cFS Amount - the amounts reported in the financial statements regarding the company's warranty estimate.

^dRange - the range of the company's warranty estimate.

^eRationale - the rationale for the recorded amount.

^fKey Assumption - a description of the key uncertain assumption in the warranty estimate.

^gUncertainty - a description of uncertainty in the estimate.

^hSensitivity - a sensitivity analysis of the warranty estimate based on movement in the key uncertain assumption.

ⁱMean of Elements – The mean of the preceding six disclosure elements.

^jContrast coefficients were +1 for Strong AC/No CAM, +4 for Strong AC/Short CAM, -3 for Moderate AC/No CAM, and -2 for Moderate AC/Short CAM.

^kContrast coefficients were -1 for Strong AC/No CAM, +5 for Strong AC/Long CAM, -3 for Moderate AC/No CAM, and -1 for Moderate AC/Long CAM.

^lContrast coefficients were +1 for Strong AC/Short CAM, +4 for Strong AC/Long CAM, -3 for Moderate AC/Short CAM, and -2 for Moderate AC/Long CAM.