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**THE EFFECT OF AUDITOR REPORTING CHOICE AND AUDIT  
COMMITTEE OVERSIGHT STRENGTH ON MANAGEMENT FINANCIAL  
DISCLOSURE DECISIONS**

BY

STEPHEN H. FULLER

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Doctor of Philosophy

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY  
ROBINSON COLLEGE OF BUSINESS  
2015

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## ACCEPTANCE

This dissertation was prepared under the direction of STEPHEN H. FULLER'S Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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## **ABSTRACT**

### **THE EFFECT OF AUDITOR REPORTING CHOICE AND AUDIT COMMITTEE OVERSIGHT STRENGTH ON MANAGEMENT FINANCIAL DISCLOSURE DECISIONS**

BY

STEPHEN H. FULLER

DECEMBER 2014

Committee Chair: Dr. Jennifer Joe

Major Academic Unit: School of Accounting

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 develop theory to predict how auditor choices about reporting on CAMs might affect manager disclosure decisions. In addition, the study investigates how the effect of auditor reporting choice on management disclosure decisions 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 by the auditor in its 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.

## 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, 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 such as critical accounting estimates. 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 et al. 2011). Prior research has consistently found that stronger audit committees are associated with higher quality financial reporting (Agoglia et al. 2011; Abbott et al. 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 have the effect of usurping the audit committee's responsibility for investor protection (PCAOB 2011b). However, audit committee oversight is likely to play a pivotal role in determining how proposed changes to the auditor's reporting model translate to changes in the quality of management's financial disclosure. Audit committees review financial statements and the auditor's report prior to their release (Beasley et al. 2009), and management must consider the audit committee's reaction to the content of the auditor 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 test 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 content of financial statements and to the decisions of investors (Griffith et al. 2014). Critical accounting estimates frequently involve complex estimations and computations which require significant management judgment (Griffith et al. 2014). The use of critical accounting estimates is pervasive in many financial reporting settings including fair value reporting, asset impairment analysis, product warranty and liability reserves and post-employment benefits (Griffith et al. 2014). 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 disclosure complementary to the financial statement presentation to improve financial reporting transparency (e.g., SEC 2003, PCAOB 2011b). Unfortunately, the broad disclosure of

uncertainty regarding critical accounting estimates has not been universally forthcoming (SEC 2003; PCAOB 2011b).

The audit process represents an avenue for improving clients' compliance with the current SEC regulations regarding disclosure on critical accounting estimates for several reasons. First, auditors interact with their clients on financial reporting matters as a matter of routine. This relationship allows auditors to keep abreast of developments in the critical accounting areas of their clients on a timely basis. Next, if changes contemplated in the proposed standard are adopted, some stakeholders feel that the 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 properly motivate the audit firms to make appropriate judgments concerning what client issues are most important to cover in the expanded audit report (Carcello et al. 2011).

In August 2013, the PCAOB released a proposed auditing standard dealing with the auditor's reporting model which required 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).<sup>1</sup> Under the proposed standard, the auditor would be required to disclose information about

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<sup>1</sup> The PCAOB project had previously proposed different options for expanding the auditor's reporting model. Each of the options provided the potential for auditors to bring increased attention to the area of critical accounting estimates. The options initially proposed in the project included (i) a new report called the "Auditor's Discussion and Analysis" (ADA), (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). Eventually, a consensus began to develop among the various stakeholders in the debate around the option involving emphasis of matter (EOM) paragraphs (PCAOB 2011b, 2012). The CAM approach in the most recent proposal is based directly on the EOM approach.

each CAM in a new section of the audit report or to state that there are no CAMs (PCAOB 2013). While auditors would be required under the proposed standard to begin reporting on CAMs, they would still have broad discretion over the level of detailed information provided. 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 (PCAOB 2011b). Other constituencies in the debate argued that if auditors provide only limited information and mainly rely on reference 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 to provide disclosure of information that investors are demanding.

To address my research questions, I conducted an experiment in which participants were 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 theory grounded in the economics and psychology literatures, 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. I found that 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 increases the spotlight on a critical accounting estimate in 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 in the evolving financial reporting environment. 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, most have focused on the areas of auditor legal liability (Kachelmeier et al. 2014 WP; Backof et al. 2014 WP; Gimbar et al. 2014 WP; Brasel et al. 2014 WP; Brown et al. 2014 WP) and investor reaction to information in CAMs (Christensen et al. 2014 WP; Sirois et al. 2014 WP). 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 (Aglia et al. 2011; Abbott et al. 2004; Bédard et al. 2004; Kang 2014 WP).

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 my study, and Section V concludes.

## **II. BACKGROUND AND THEORY**

### **2.1 Prior Research on Management Disclosure Choice**

Prior research has identified several factors affecting management’s choice to make disclosure. Much of this research has identified a variety of offsetting incentives influencing management’s disclosure choice. On one hand, managers have a number of positive incentives to make greater disclosure. For example, managers might provide higher quality disclosure to establish a reputation for credibility with investors (Stocken 2000; Beyer et al. 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 et al. 2005; Beyer et al. 2010).

On the other hand, managers also have incentives discouraging greater disclosure. First, since a significant component of management compensation is frequently based on 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 et al. 2009; Beyer et al. 2010).

The presence of these offsetting incentives likely motivates management to seek a level of disclosure that secures the greatest net benefit of disclosure after considering the costs incurred as a result of disclosure. It is important to note that 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 be expected to provide less voluntary disclosure of bad news (Dye 1985; Jung and Kwon 1988; Penno 1997; Pae 2002; Beyer et al. 2010). It is possible that the changes to the auditor's reporting model currently proposed might shine a spotlight on key financial statement areas and inform investors that management has private information it is not disclosing about these areas. Therefore, it is important to assess the impact that such changes might have on management's decision what to disclose as a result.

## **2.2 PCAOB Project**

In June 2011, The Public Company Accounting Oversight Board (PCAOB) initiated a project to explore whether and how the current auditor's reporting model might be modified to

provide information of greater value to investors (PCAOB 2011a). Based on the PCAOB's own views and outreach activities, 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). 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).

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). Each of these stakeholders largely opposed the concept of an ADA or extension of the audit report to areas outside the financial statements (e.g., all or part of MDA<sup>2</sup>) due to concerns about the source of

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<sup>2</sup> 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

company information being the auditor as well as cost and administrative burdens (PCAOB 2011b). Investors, however, expressed significant support for the concept of an ADA. Garnering somewhat more of a consensus, the proposal to expand and mandate the use of EOM paragraphs was the option that received the greatest support on both sides of the debate (PCAOB 2011b, 2012).

In August 2013, the PCAOB released a proposed auditing standard dealing with the auditor's reporting model, adopting an approach similar to the EOM paragraph approach. 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).

The previous debate concerning the EOM paragraph option to the expansion of the audit report is relevant to the proposed standard requirement for the auditor's reporting on CAMs, which is very similar in concept. In the debate, auditors generally took the position that any

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read the client's MDA and resolve any inconsistencies between the MDA and the audited financial statements (PCAOB 2003).

EOM paragraph 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) in the debate took the position that such a limited EOM paragraph provided little or no benefit and amounted to “roadmapping” for financial reporting (PCAOB 2011b). They called for greater information content in EOM paragraphs 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 inform the debate by examining what impact reporting on CAMs might have on management disclosure choice when the level of detail in the auditor discussion of the CAM in the audit report is either basic (i.e., roadmapping) or more extensive in nature compared to a control condition where the critical accounting estimate is not treated as a CAM.

Several concurrent studies explore the effect of the proposed auditing standard on various stakeholders in the financial reporting process. The area most commonly researched has been the effect of auditor CAM reporting on assessments of auditor legal liability for misstatements in the client’s financial statements. Several of these studies in a variety of specific contexts have found that auditor reporting of a CAM may lead to a reduced level of legal liability for auditors (Kachelmeier et al. 2014 WP; Brasel et al. 2014 WP; Brown et al. 2014 WP). In other specific contexts, auditor reporting of a CAM was found to lead to higher auditor liability assessments (Gimbar et al. 2014 WP). Another area being studied is the impact of auditor CAM reporting on investor decisions. Christensen et al. (2014) find that reporting of a CAM concerning fair value decreased the likelihood that non-professional investors would invest in the target firm. Sirois et

al. (2014) found that discussion of a “key audit matter” in the audit report led to greater “information search” about the matter by their graduate student proxies for 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. 2014 WP). The relevance of all 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.

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). In an abstract setting where non-financial management has private information that the auditor is not aware of concerning key accounting estimates, Cade and Hodge (2014 WP) find that non-financial managers 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. The Cade and Hodge (2014 WP) 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.

### **2.3 Audit Committee’s Role in Financial Reporting**

Audit Committees provide a critical oversight role over corporate 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). SOX included a

number of provisions designed to strengthen audit committees and expand their oversight responsibilities (U.S. House of Representatives 2002). For example, SOX requires that all audit committee members be independent and that companies disclose “whether or not ... the audit committee of [the] issuer is comprised of at least [one] member who is a financial expert” (U.S. House of Representatives 2002) as defined by SOX (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 (see Agoglia et al. 2011 for a review). For instance, Agoglia et al. (2011) found experimental evidence that stronger audit committees constrain management exploitation of “bright-line” rules-based accounting standards for “opportunistic reporting”. Abbott et al. (2004) found that audit committees that were more independent and met more frequently were less likely to be associated with accounting restatements (Agoglia et al. 2011). In addition, Bédard et al. (2004) provide evidence that stronger audit committee independence and expertise reduce the likelihood of earnings management (Agoglia et al. 2011).

Prior research on audit committee oversight has also identified cross-sectional variance in the nature of audit committees’ approach to their oversight responsibilities. For example, two different survey studies (Beasley et al. 2009; Cohen et al. 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 et al. 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 et al. 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.

In the course of the debate over the proposed standard, many audit committee members voiced concerns that expanding the auditor’s reporting model might have the effect of usurping the audit committee’s responsibility for investor protection (PCAOB 2011b). I seek to inform the debate by investigating whether management’s accountability to the audit committee actually makes the audit committee’s oversight critical to the success of the proposed standard.

## **2.4 Hypothesis Development**

### ***2.4.1 Effect of Auditor Reporting of CAMs on Management Disclosure***

Recall that managers face a number of offsetting incentives when deciding what level of financial disclosure to provide. On one hand, managers are encouraged to disclose by concerns

over their reputation (Stocken 2000; Beyer et al. 2010), litigation risk (Skinner 1997; Field et al. 2005; Beyer et al. 2010) and the firm's cost of capital (Beyer et al. 2010). On the other hand, managers are discouraged from disclosure to avoid proprietary costs (Fischer and Verrecchia 2004; Arya et al. 2009; Beyer et al. 2010) and to maximize their own compensation under stock-price-sensitive compensation plans (Beyer et al. 2010). In addition, management disclosure choice is sensitive to how informed managers believe investors are about whether management possesses private information about the firm's risks and prospects (Beyer et al. 2010). If investors are thought to know less (more) about management's possession of private information, management would be expected to provide less (more) 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."<sup>3</sup> 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 even higher and should lead to even greater level of disclosure provided by management. Based

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<sup>3</sup> 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 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.

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.*

#### **2.4.2 Moderating Effect of Audit Committee Oversight Strength**

As previously discussed, management is accountable to the audit committee for its reporting choices. As part of their duties, audit committees communicate with both management and auditors and review the company's financial statements, disclosures and audit report in order to perform their financial reporting oversight (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. To the extent that an auditor's reporting of a critical accounting estimate as a CAM increases the scrutiny of management's disclosure decision by the audit committee, the auditor's reporting on the CAM is also inconsistent with management's preference.

Prior research streams in psychology and accounting identify the concept of "motivated sensitivity" (Ditto et al. 1998; Hales 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.<sup>4</sup> As with motivated reasoning, information that is preference-consistent is expected

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<sup>4</sup> The psychology and accounting research streams have each developed a stream of literature on the effect of "motivated reasoning" (Kunda 1990; Kadous et al. 2003; Hales 2007; Hales et al. 2011). Generally, motivated

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). One example given in the motivated sensitivity literature relates to unfavorable health information. People receiving unfavorable health information (i.e., preference-inconsistent information) are found to process it more deeply than preference-consistent information (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 likely increases the audit committee's scrutiny given to management's disclosure decision. Furthermore, *ceteris paribus*, 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 perceived 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 decision by the content of reporting on the CAM 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

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reasoning refers to the way in which people search for and process information relevant to a decision when the decision maker has a preference as to the final decision. People are thought to vigorously pursue and readily accept information that is consistent with their preference and attempt to discredit and reject information that is preference-inconsistent. These behaviors are subject to a constraint that the decision maker desires an appearance of objectivity in their decision making (Kunda 1990; Kadous et al. 2003).

1994; Peecher et al. 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; Peecher et al. 2013). One determining factor for which strategy is used is whether the attitudes of the evaluator are known. 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 much greater when the audit committee was strong than when it was weak (Agoglia et al. 2011). These managers facing stronger audit committees also made more conservative accounting treatment decisions as a result of that concern.

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

#### 3.1 Participants

Given the high degree of professional judgment required for the experimental task in this study, it was important to ensure that participants had strong task-relevant experience (Trotman 2005). Accordingly, experimental participants are seasoned public company financial executives, primarily CFOs. CFOs are the most likely to make the key financial disclosure decisions for their organizations and are therefore best equipped to provide relevant and reliable *ex ante* insights into the potential effects of the proposed standard. I identified potential participants in the Audit Analytics database of officer changes. I collected recent CFO appointments<sup>5</sup> for public companies between 2007 and mid-2014 with positive revenues up to \$2 billion.<sup>6</sup> 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 packages<sup>7</sup>, 123 of which were

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<sup>5</sup> 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.

<sup>6</sup> I followed the approach of Bishop et al. (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 as opposed to shell or other non-operating entities. 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.

<sup>7</sup> 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 ANCOVAs reported in Tables 2-6. In all cases, MAILING was not significant in the analyses (all  $p$ 's > .26, two-tailed).

returned as undeliverable, for a net total of 1,766. A total of 142 participants completed the experimental materials, for a response rate of 8.0%.<sup>8</sup>

Table 1 presents the demographics of participants in the study. The extent and nature of the participants' experience is a strong match for the demands of the experimental task. Participants had a mean work experience of 29.2 years<sup>9</sup>. A total of 135 (95%) 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 during their career. Approximately 73.9% of the participants were current or former CPAs, 71.8% had prior experience as an auditor, and 23.9% were current or former audit committee members. Mean age of the participants was 54.0 and 87.9% (12.1%) of participants were male (female).<sup>10,11</sup>

[Insert Table 1 here]

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<sup>8</sup> The response rate of 8% falls within the range of response rates in recent studies involving accounting and finance professionals including Agoglia et al. 2011 (11.3%); Bennett et al. 2013 WP (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 ANCOVAs reported in Tables 2-6. In all cases, EARLYLATE was not significant in the analyses (all  $p$ 's > .49, two-tailed).

<sup>9</sup> Thirteen of the 142 participants (9.2%) 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+").

<sup>10</sup> 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.

<sup>11</sup> I tested for systematic differences between experimental cells for all key demographic variables across all ANCOVAs which I report as primary results (All conditions, No CAM versus Long CAM, Short CAM versus Long CAM and No CAM versus Short CAM). Only one variable, GENDER, yielded a significant difference between cells ( $F_{5, 135} = 1.99$ ,  $p = .084$ , two-tailed when All Conditions were analyzed and  $F_{3, 92} = 3.325$ ,  $p = .023$ , 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 all ANCOVAs reported in Tables 2-6. In all cases, GENDER was not significant in the analyses (all  $p$ 's > .22, two-tailed). Accordingly, I did not include GENDER in the reported ANCOVA results.

## 3.2 Design

### 3.2.1 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 a description of the audit committee’s oversight of the financial reporting function. Prior research has found that while most audit committees have at least one financial expert as defined by SEC rules, a minority of all audit committee members have expertise in accounting (Cohen et al. 2014; Badolato et al. 2013 WP). Thus, in the *strong audit committee* condition, all three members of the audit committee were described as accounting experts with direct accounting or financial reporting experience (Agoglia et al. 2011). In the *moderate audit committee* 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).<sup>12</sup> Prior research has also identified significant cross-sectional variance in the intensity of audit committees’ approach to their oversight responsibilities (Beasley et al. 2009; Cohen et al. 2010). Therefore, in the *strong audit committee* condition, the materials described the audit committee as playing an active role in resolution of challenging accounting and reporting issues including asking many questions about accounting and reporting issues. In the *moderate audit committee* condition, the audit committee was described as playing a limited role in resolution of challenging accounting and

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<sup>12</sup> 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.

reporting issues and occasionally asking questions about accounting and reporting 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 told that the auditor had decided to treat the critical accounting estimate as a CAM and were provided with the auditor's brief discussion of the CAM in the audit report. The discussion was limited to the minimal 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 told that the auditor had decided to treat the critical accounting estimate as a CAM and were provided with 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.<sup>13</sup>

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<sup>13</sup> 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.

### ***3.2.2 Experimental Materials and Task***

The experimental materials involved a financial reporting disclosure scenario.<sup>14</sup> Participants were asked to assume the role of Chief Financial Officer for a hypothetical public company named Andarex Corp. which has traditionally manufactured and sold high-end consumer products. Andarex had been public for 10 years and has a record of consistently meeting its revenue and earnings growth targets. Background materials also described good relations between Andarex and its auditors and a history of unqualified opinions on financial reporting and internal controls. In addition, Andarex's audit committee was described based on the varying treatment conditions discussed above.

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 for which the auditor was considering treatment as a CAM. Specifically, the participants would review case information about the warranty exposure Andarex has for a newly launched product.<sup>15</sup>

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

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<sup>14</sup> 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.

<sup>15</sup> In the interest of accommodating professionals from a broad range of industries, 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).

terms and customer base for the product. The case described 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 product. Participants received a detailed warranty calculation setting forth various assumptions including the one with significant uncertainty. 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 in the current year 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.

### ***3.2.3 Dependent Variables***

I collected one primary dependent variable and six secondary dependent variables from participants in the study. First, the primary dependent variable was a measurement of the extent of disclosure (*Extent of Disclosure*) that the participant would choose to provide for the warranty estimate rated 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 intend to communicate to the financial statement user through their disclosure. In this context, I contend that increases in *Extent of Disclosure* correspond with increases in disclosure quality as users have more information with which to assess the risks and prospects of the firm. 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 before delving into the specifics of what elements of disclosure managers may choose to enrich the overall disclosure.

Participants were next asked to consider 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.<sup>16</sup> Each rating addressed a different element of disclosure. 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 based on movement in the key uncertain assumption (*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

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<sup>16</sup> 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.

the estimate (*UNCERTAINTY*).<sup>17</sup> A concrete example of each disclosure element was provided before the rating was elicited. The disclosure element examples are included in Appendix C.

### **3.2.4 Procedures**

The experimental materials were divided into two packets. Packet 1 included the case materials and concluded with the disclosure ratings described above. Participants first read an introduction to the experiment including the role of CFO they assume in the case. Next, the participants were given information regarding the company, its audit committee (including the *AC Strength* manipulation) 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 (the *Auditor Reporting Choice* manipulation). Finally, a detailed discussion of the warranty reserve issue was provided. After reviewing the materials, participants provided their disclosure ratings.

Participants were instructed to read and complete Packet 1 before proceeding to Packet 2. Packet 2 was a post-experimental questionnaire which included manipulation check questions as well as questions about the experiment, participant judgments and demographic information.

Participants were instructed not to refer to Packet 1 while completing Packet 2. The flow of the experiment is summarized in Figure 2.

[Insert Figure 2 here]

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<sup>17</sup> Taken together, I contend that disclosure of all these elements would result in a rich disclosure of the critical accounting estimate more in line with the intentions of the SEC regulations. 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 is commonplace and managers are less likely to be sensitive to disclosure of these elements.

## IV. RESULTS

### 4.1 Manipulation Checks

*AC Strength* was manipulated as either moderate or strong between subjects. To test whether the manipulation was effective, I collected participant ratings of the audit committee's strength on two dimensions, accounting/financial expertise (Agoglia et al. 2011) and audit committee involvement in financial reporting decisions. Participants rated audit committee oversight strength on a 7-point Likert scale where 1 = Low and 7 = High (Agoglia et al. 2011).<sup>18</sup> Participants in the Strong *AC Strength* condition rated the audit committee's accounting/financial expertise as significantly stronger than participants in the Moderate *AC Strength* condition (6.07 versus 2.91,  $t_{139}=15.61$ ,  $p<.001$ , two-tailed). Participants in the Strong *AC* condition also rated the audit committee's involvement in financial reporting issues as significantly stronger than participants in the Moderate *AC Strength* condition (5.83 versus 3.12,  $t_{138}=11.21$ ,  $p<.001$ , two-tailed). These ratings provide evidence of an effective manipulation of *AC Strength* in the experiment.

To test the effectiveness of my *Auditor Reporting Choice* manipulation, I performed two tests. First, all participants were asked to recall whether the auditor in the case decided to report Andarex's warranty issue as a CAM. Of the 142 participants, 137 (96.5%) correctly recalled the auditor's choice regarding the CAM.<sup>19</sup> Next, I specifically 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

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<sup>18</sup> Two of the 142 participants failed to provide one or both of the *AC Strength* ratings and are excluded from the manipulation check tests.

<sup>19</sup> Of the 5 remaining participants, four answered the question incorrectly and one failed to answer the question.

auditor in the audit report. Participants in the No CAM condition are excluded from this test as no CAM discussion was provided by the auditor on which to measure informativeness.

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.<sup>20</sup> Participants in the Long CAM condition rated the auditor's CAM reporting as significantly more informative than in the Short CAM condition (4.67 versus 3.89,  $t_{90}=2.73$ ,  $p<.01$ , two-tailed). Collectively, these results provide evidence of an effective manipulation of *Auditor Reporting Choice*.

## 4.2 Hypothesis Tests

Hypothesis 1 predicts that as the auditor increases the spotlight on a critical accounting estimate through the level of detailed reporting given the matter in its audit report, managers will increase the level of disclosure made regarding the matter. As reported in table 2, the pattern of results followed this prediction. Participants rated the *Extent of Disclosure* they would provide about the warranty exposure issue lowest in the No CAM control condition ( $\bar{x}=6.72$ ) and *Extent of Disclosure* increased as the auditor provided greater detail in the Short CAM ( $\bar{x}=7.08$ ) and Long CAM ( $\bar{x}=7.42$ ) conditions, respectively. To test hypothesis 1, I conducted an ANCOVA analysis of the effect of *Auditor Reporting Choice* and *AC Strength* on the primary dependent variable, *Extent of Disclosure*.<sup>21</sup> Results of the ANCOVA reported in table 2 show a marginal effect of *Auditor Reporting Choice* on *Extent of Disclosure* ( $F_{2, 134}=1.889$ ,  $p=.078$ , one-tailed)

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<sup>20</sup> 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.

<sup>21</sup> I include a covariate in the analysis for the effect of the participants' concern that disclosure would reveal proprietary information about the company (*Proprietary*) as prior research has identified this as a significant factor in management's disclosure decision (Fischer and Verrecchia 2004; Arya et al. 2009; Beyer et al. 2010). As expected, the covariate for Proprietary has a significant effect on *Extent of Disclosure* ( $F_{2, 134}=12.42$ ,  $p<.001$ , one-tailed). Results of an ANOVA excluding the *Proprietary* covariate were qualitatively similar. While the significance of the main effects of *Auditor Reporting Choice* and *AC Strength* were somewhat weaker, the interaction of *Auditor Reporting Choice* and *AC Strength* remained significant at  $p<.01$ .

providing marginal support for Hypothesis 1 indicating that managers respond to the auditor providing greater detail about a critical accounting estimate in its report by increasing their own disclosure of the matter.

[Insert Table 2 here]

Hypothesis 2 predicts that the strength of the audit committee's oversight will moderate the effect of the auditor's CAM reporting choice on the *Extent of Disclosure* about the warranty estimate issue provided by the manager. Specifically, H2 predicts that the effect of the auditor's CAM reporting choice on *Extent of Disclosure* will be greatest when audit committee oversight is strongest. The results reported in Table 2<sup>22</sup> and Figure 3 provide support for this prediction. When audit committee oversight is strong, the *Extent of Disclosure* provided by the manager is greatest in the Long CAM condition ( $\bar{x}$  =8.08) compared to the No CAM condition ( $\bar{x}$  =6.95) and the Short CAM discussion ( $\bar{x}$  =6.79). When audit committee oversight strength is only moderate, the *Extent of Disclosure* provided by the manager is no greater in the Long CAM condition ( $\bar{x}$  =6.53) than in the No CAM condition ( $\bar{x}$  =6.52) and is actually lower than in the Short CAM discussion ( $\bar{x}$  =7.36).<sup>23</sup> As reported in Table 2, the interaction of *Auditor Reporting Choice* and *AC Strength* is significant ( $F_{2, 134}$ =5.448,  $p$ =.003, one-tailed).<sup>24</sup> Simple effects analysis reveals that when audit committee oversight is strong, *Extent of Disclosure* is higher in the Long CAM condition than in the No CAM condition ( $F_{1, 45}$ =8.195,  $p$ =.006) and the Short

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<sup>22</sup> One of the 142 participants did not provide an *Extent of Disclosure* rating, the primary dependent variable. This participant is excluded from all results for *Extent of Disclosure*.

<sup>23</sup> See Supplemental Analysis – Comparison of CAM conditions for a discussion of this unexpected result.

<sup>24</sup> 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 it is a more powerful test of a predicted ordinal interaction (Buckless and Ravenscroft 1990). Contrast coefficients were +5 for Strong AC/Long CAM, +2 for Strong AC/ Short CAM, -1 for Strong AC/No CAM, -1 for Moderate AC/Long CAM, -2 for Moderate AC/ Short CAM, and -3 for Moderate AC/No CAM. As expected, results of the planned contrast reported in Table 2, Panel C were significant ( $t_{135}$ =2.69,  $p$ =.004, one-tailed).

CAM condition ( $F_{1,47}=7.143$ ,  $p=.010$ ). However, when audit committee oversight is only moderate, *Extent of Disclosure* is no different in the Long CAM condition than in the No CAM condition ( $F_{1,41}=.013$ ,  $p=.910$ ) and is actually lower than in the Short CAM condition ( $F_{1,41}=4.925$ ,  $p=.032$ ). Collectively, these results indicate that the audit committee's oversight will play an important role in determining the impact of auditors' increased reporting of CAMs on managers' disclosure choices with stronger audit committee oversight leading to greater increases in disclosure when auditors increase the level of detail given a CAM in their audit reports.

[Insert Figure 3 here]

### 4.3 Supplemental Analysis

#### 4.3.1 Comparisons of CAM conditions

In order to gain further insight into the results, I performed a series of supplemental comparisons to determine specific effects of the various levels of CAM reporting choices. I first compared the No CAM control condition and Long CAM condition. 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 pattern of results for this comparison are presented in Figure 4. When audit committee oversight is strong, the *Extent of Disclosure* provided by the manager is significantly greater ( $F_{1,45}=8.195$ ,  $p=.006$ ) in the Long CAM condition ( $\bar{x}=8.08$ ) than in the No CAM condition ( $\bar{x}=6.95$ ). When audit committee oversight strength is only moderate, the *Extent of Disclosure* provided by the manager is no greater ( $F_{1,41}=.013$ ,  $p=.910$ ) in the Long CAM condition ( $\bar{x}=6.53$ ) than in the No CAM condition ( $\bar{x}=6.52$ ). As reported in Table 3, the results were consistent with the full results reported above. As expected, the ANCOVA results reveal a significant effect of *Auditor Reporting Choice* on

*Extent of Disclosure* ( $F_{1, 87}=3.579$ ,  $p=.031$ , one-tailed). In addition, the interaction of *Auditor Reporting Choice* and *AC Strength* is significant ( $F_{1, 87}=2.800$ ,  $p=.049$ , one-tailed).<sup>25</sup> These results provide evidence that inclusion of a detailed CAM discussion regarding a critical accounting estimate in the audit report leads to greater disclosure by managers than when the estimate is not treated as a CAM by the auditor and this effect is strongest when audit committee oversight is strong.

[Insert Table 3 and Figure 4 here]

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. As can be seen in Figure 5, when audit committee oversight is strong, the *Extent of Disclosure* provided by the manager is significantly greater ( $F_{1, 47}=7.143$ ,  $p=.010$ ) in the Long CAM condition ( $\bar{x}=8.08$ ) than in the Short CAM condition ( $\bar{x}=6.79$ ). When audit committee oversight strength is only moderate, the *Extent of Disclosure* provided by the manager in the Long CAM condition ( $\bar{x}=6.53$ ) is actually significantly lower ( $F_{1, 41}=4.925$ ,  $p=.032$ ) than in the Short CAM condition ( $\bar{x}=7.36$ ).<sup>26</sup> Results of the ANCOVA are presented in Table 4. While the main effect of *Auditor Reporting Choice* is not significant ( $F_{1, 89}=.131$ ,  $p=.359$ , one-tailed), the interaction of *Auditor Reporting Choice* and *AC Strength* is significant ( $F_{1, 89}=9.921$ ,  $p=.001$ ,

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<sup>25</sup> 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*. Contrast coefficients were +5 for Strong AC/Long CAM, -1 for Strong AC/No CAM, -1 for Moderate AC/Long CAM, and -3 for Moderate AC/No CAM. As expected, results of the planned contrast reported in Table 3, Panel C were significant ( $t_{88}=3.51$ ,  $p=.001$ , one-tailed).

<sup>26</sup> 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 8. 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.

one-tailed).<sup>27</sup> 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 that greater detail in the auditor's CAM discussion is likely to lead to greater disclosure by management.

[Insert Table 4 and Figure 5 here]

Finally, I compared the No CAM control condition and the Short CAM condition 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. As can be seen in Figure 6, when audit committee oversight is strong, the *Extent of Disclosure* provided by the manager is no different ( $F_{1, 43}=0.030$ ,  $p=.864$ ) in the Short CAM condition ( $\bar{x}=6.79$ ) from the No CAM condition ( $\bar{x}=6.95$ ). When audit committee oversight strength is only moderate, the *Extent of Disclosure* provided by the manager in the Short CAM condition ( $\bar{x}=7.36$ ) is significantly greater ( $F_{1, 47}=6.952$ ,  $p=.011$ ) than in the No CAM condition ( $\bar{x}=6.52$ ).<sup>28</sup> As reported in table 5, *Auditor Reporting Choice* is not significant ( $F_{1, 91}=2.404$ ,  $p=.124$ , two-tailed).<sup>29</sup> The interaction of *Auditor Reporting Choice* and *AC Strength* was marginally

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<sup>27</sup> 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*. Contrast coefficients were +4 for Strong AC/Long CAM, +1 for Strong AC/Short CAM, -2 for Moderate AC/Long CAM, and -3 for Moderate AC/Short CAM. As expected, results of the planned contrast reported in Table 4, Panel C were significant ( $t_{90}=2.07$ ,  $p=.021$ , one-tailed).

<sup>28</sup> 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 27. 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 9. 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.

<sup>29</sup> I used two-tailed tests for this ANCOVA because the pattern of results was inconsistent with theory.

significant ( $F_{1, 91}=2.862, p=.094$ , two-tailed) but not in the pattern predicted by theory.<sup>30</sup>

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 5 and Figure 6 here]

#### **4.3.2 Disclosure Element Ratings**

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 develop 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 Tables 6 through 9. For each disclosure element in each comparison (all conditions, 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 to disclose 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'

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<sup>30</sup> 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*. Contrast coefficients were +4 for Strong AC/Short CAM, +1 for Strong AC/No CAM, -2 for Moderate AC/Short CAM, and -3 for Moderate AC/No CAM. Results of the planned contrast reported in Table 5, Panel C were not significant ( $t_{92}=-.082, p=.935$ , two-tailed).

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.<sup>31</sup>

In the comparison of all six treatment conditions reported in Table 6, the planned contrast was marginally significant for *RANGE* ( $t_{136}=1.404$ ,  $p=.082$ , one-tailed). In addition, the planned contrasts for *KEY ASSUMPTION* and *SENSITIVITY* were significant (all  $p's < .05$ , one-tailed). In the comparison of the No CAM and Long CAM conditions reported in Table 7, *RANGE*, *KEY ASSUMPTION*, and *SENSITIVITY* were all significant (all  $p's < .053$ , one-tailed). In the comparison of the Short CAM and Long CAM conditions reported in Table 8, *KEY ASSUMPTION* and *SENSITIVITY* were significant (all  $p's < .05$ , one-tailed). In all of these results, the disclosure element was 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 reported in Table 9, none of the planned contrasts for *RANGE*, *KEY ASSUMPTION*, or *SENSITIVITY* disclosure elements were found to be significant (all  $p's > .62$ , 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

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<sup>31</sup> 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.

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  $> .29$ , 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 in the way of incremental information beyond information in the other disclosure elements.

[Insert Tables 6 through 9 here]

#### **4.4 Discussion**

The primary and supplemental analyses provide a number of important insights into the effect of the proposed standard on management disclosure decisions. First, the results generally support my prediction that managers will react to the auditor shining a spotlight on a highly uncertain critical accounting estimate by increasing their own disclosure of the matter. Second, audit committee oversight is likely to play an important role in determining the impact of auditors' increased reporting of CAMs on managers' disclosure choices. Managers facing strong audit committee oversight are likely to increase the extent of their disclosure more than when the audit committee oversight is only moderate. Third, 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. When the auditor provides a minimal discussion of the CAM, management does not appear likely to respond with increased disclosure. However, when the auditor's CAM discussion is detailed, management is likely to respond with increased disclosure of its own. 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. This is particularly encouraging as this was one of the central goals of the PCAOB auditor's reporting model project.

## 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 decided to treat 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 et al. 2001, Sanchez et al. 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 Description<sup>32</sup>

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.

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<sup>32</sup> 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.

## Appendix B – Auditor Reporting Choice<sup>33</sup>

### 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.*

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<sup>33</sup> 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%.*

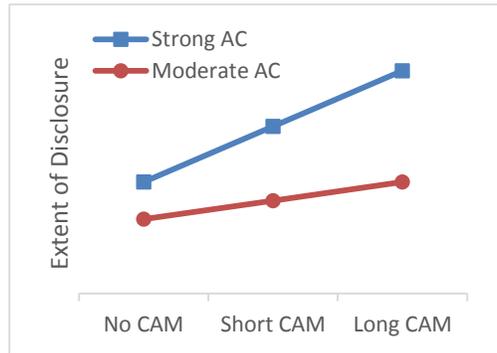
### UNCERTAINTY

*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.*

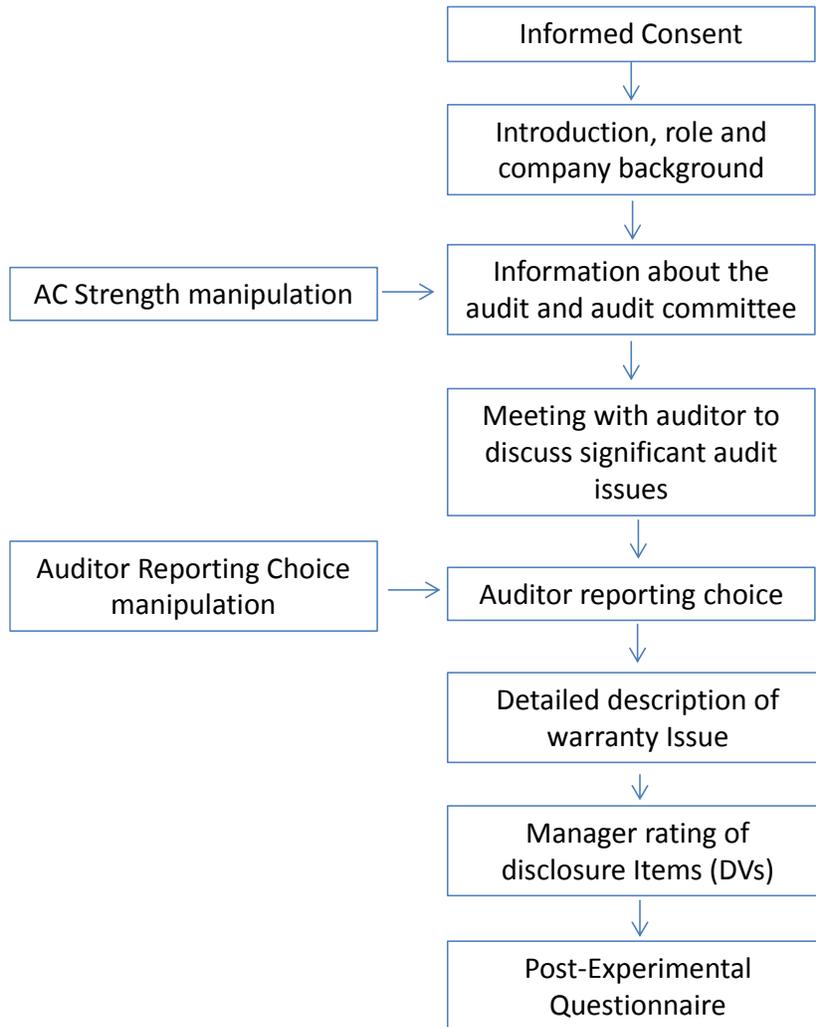
### SENSITIVITY

*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.*

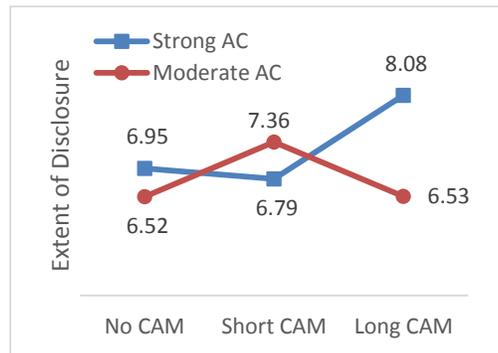
**Figure 1 – Predicted Pattern of Results – All Conditions**



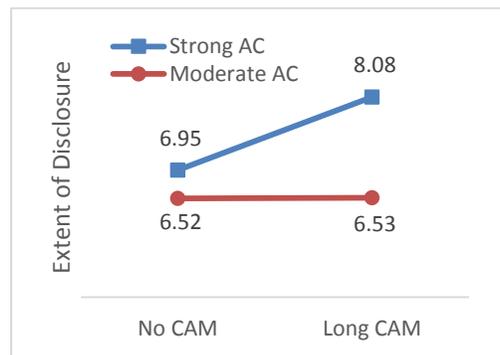
**Figure 2 – Flow of Experiment**



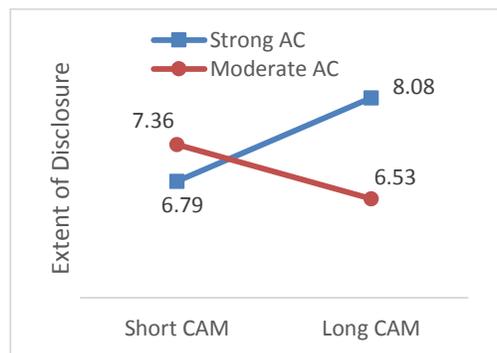
**Figure 3 – Actual Pattern of Results – All Conditions**



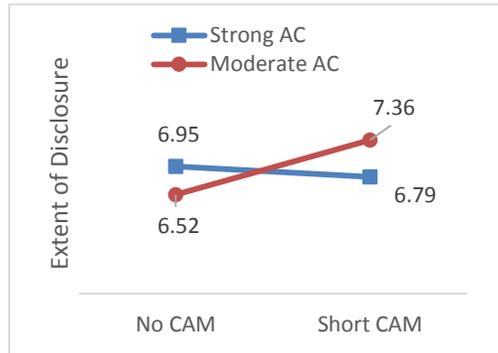
**Figure 4 – Actual Pattern of Results – No CAM and Long CAM Conditions**



**Figure 5 – Actual Pattern of Results – Short CAM and Long CAM Conditions**



**Figure 6 – Actual Pattern of Results for H2 – No CAM and Short CAM Conditions**



**Table 1 – Demographic Information**

Years of Work Experience	29.2 years
Has Experience as Auditor	71.8%
Current or Former Audit Committee Member	23.9%
Current or Former CPA	73.9%
Age	54.0 years
Gender	87.9% Male 12.1% Female

**Table 2 – Rating of Extent of Disclosure – All Treatment Conditions**

**Panel A: Mean (standard deviation) Ratings of Extent of Disclosure<sup>a</sup> by Audit Committee Oversight Strength and Auditor Reporting Choice**

		AUDITOR REPORTING CHOICE <sup>b</sup>			Overall
		No CAM	Short CAM	Long CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH <sup>c</sup>	STRONG	6.95 (1.76) n = 22	6.79 (1.72) n = 24	8.08 (1.62) n = 26	7.31 (1.77) n = 72
	MODERATE	6.52 (1.78) n = 25	7.36 (1.73) n = 25	6.53 (1.90) n = 19	6.83 (1.82) n = 69
Overall		6.72 (1.77) n = 47	7.08 (1.73) n = 49	7.42 (1.89) n = 45	

**Panel B: ANCOVA 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	9.182	3.267	<b>.037</b>
Auditor Reporting Choice	2	10.616	1.889	<b>.078</b>
Audit Committee Oversight Strength X Auditor Reporting Choice	2	30.622	5.448	<b>.003</b>
Covariate: Proprietary Information <sup>d</sup>	1	34.909	12.422	<b>.001</b>

**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 <sup>e</sup>	2.690	<b>.004</b>

<sup>a</sup>Extent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

<sup>b</sup>Auditor Reporting Choice was varied at three levels, No CAM, Short CAM and Long CAM. See Appendix B for excerpts for each condition.

<sup>c</sup>Audit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

<sup>d</sup>Participants rated how concerned they were that disclosing information about the warranty exposure issue would reveal proprietary information about the company to its competitors on a 7-point scale where 1 = Very little concerned and 7 = Very concerned.

<sup>e</sup>Contrast coefficients were -1 for Strong AC/No CAM, +2 for Strong AC/ Short CAM, +5 for Strong AC/Long CAM, -3 for Moderate AC/No CAM, -2 for Moderate AC/ Short CAM, and -1 for Moderate AC/Long CAM.

**Table 3 – Rating of Extent of Disclosure – Comparison of No CAM and Long CAM conditions**

**Panel A: Mean (standard deviation) Ratings of Extent of Disclosure<sup>a</sup> by Audit Committee Oversight Strength and Auditor Reporting Choice**

		AUDITOR REPORTING CHOICE <sup>b</sup>		Overall
		No CAM	Long CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH <sup>c</sup>	STRONG	6.95 (1.76) n = 22	8.08 (1.62) n = 26	7.56 (1.76) n = 48
	MODERATE	6.52 (1.78) n = 25	6.53 (1.90) n = 19	6.52 (1.81) n = 44
Overall		6.72 (1.77) n = 47	7.42 (1.89) n = 45	

**Panel B: ANCOVA 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	28.442	10.730	<i>.001</i>
Auditor Reporting Choice	1	9.486	3.579	<i>.031</i>
Audit Committee Oversight Strength X Auditor Reporting Choice	1	7.421	2.800	<i>.049</i>
Covariate: Proprietary Information <sup>d</sup>	1	41.167	15.531	<i>.000</i>

**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 <sup>e</sup>	3.507	<i>.001</i>

<sup>a</sup>Extent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

<sup>b</sup>Auditor Reporting Choice was varied at three levels, No CAM, Short CAM and Long CAM. See Appendix B for excerpts for each condition.

<sup>c</sup>Audit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

<sup>d</sup>Participants rated how concerned they were that disclosing information about the warranty exposure issue would reveal proprietary information about the company to its competitors on a 7-point scale where 1 = Very little concerned and 7 = Very concerned.

<sup>e</sup>Contrast 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 4 – Rating of Extent of Disclosure – Comparison of Short CAM and Long CAM conditions**

**Panel A: Mean (standard deviation) Ratings of Extent of Disclosure<sup>a</sup> by Audit Committee Oversight Strength and Auditor Reporting Choice**

		AUDITOR REPORTING CHOICE <sup>b</sup>		Overall
		Short CAM	Long CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH <sup>c</sup>	STRONG	6.79 (1.72) n = 24	8.08 (1.62) n = 26	7.46 (1.78) n = 50
	MODERATE	7.36 (1.73) n = 25	6.53 (1.90) n = 19	7.00 (1.83) n = 44
Overall		7.08 (1.73) n = 49	7.42 (1.89) n = 45	

**Panel B: ANCOVA 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	5.855	2.009	<b>.080</b>
Auditor Reporting Choice	1	0.383	0.131	.359
Audit Committee Oversight Strength X Auditor Reporting Choice	1	28.913	9.921	<b>.001</b>
Covariate: Proprietary Information <sup>d</sup>	1	10.916	3.745	<b>.028</b>

**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 <sup>e</sup>	2.066	<b>.021</b>

<sup>a</sup>Extent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

<sup>b</sup>Auditor Reporting Choice was varied at three levels, No CAM, Short CAM and Long CAM. See Appendix B for excerpts for each condition.

<sup>c</sup>Audit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

<sup>d</sup>Participants rated how concerned they were that disclosing information about the warranty exposure issue would reveal proprietary information about the company to its competitors on a 7-point scale where 1 = Very little concerned and 7 = Very concerned.

<sup>e</sup>Contrast 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 5 – Rating of Extent of Disclosure – Comparison of No CAM and Short CAM conditions**

**Panel A: Mean (standard deviation) Ratings of Extent of Disclosure<sup>a</sup> by Audit Committee Oversight Strength and Auditor Reporting Choice**

		AUDITOR REPORTING CHOICE <sup>b</sup>		Overall
		No CAM	Short CAM	
AUDIT COMMITTEE OVERSIGHT STRENGTH <sup>c</sup>	STRONG	6.95 (1.76) n = 22	6.79 (1.72) n = 24	6.87 (1.72) n = 46
	MODERATE	6.52 (1.78) n = 25	7.36 (1.73) n = 25	6.94 (1.79) n = 50
Overall		6.72 (1.77) n = 47	7.08 (1.73) n = 49	

**Panel B: ANCOVA 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	.086	.030	.862
Auditor Reporting Choice	1	6.817	2.404	.124
Audit Committee Oversight Strength X Auditor Reporting Choice	1	8.115	2.862	<b>.094</b>
Covariate: Proprietary Information <sup>d</sup>	1	22.898	8.076	<b>.006</b>

**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 <sup>e</sup>	-0.082	.935

<sup>a</sup>Extent of Disclosure was rated on a 10-point scale where 1=minimal disclosure and 10=extensive disclosure.

<sup>b</sup>Auditor Reporting Choice was varied at three levels, No CAM, Short CAM and Long CAM. See Appendix B for excerpts for each condition.

<sup>c</sup>Audit Committee Oversight Strength was varied at two levels, moderate and strong. See Appendix A for excerpts for each condition.

<sup>d</sup>Participants rated how concerned they were that disclosing information about the warranty exposure issue would reveal proprietary information about the company to its competitors on a 7-point scale where 1 = Very little concerned and 7 = Very concerned.

<sup>e</sup>Contrast 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 6 – Summary of Disclosure Element Ratings – Comparison of all CAM conditions**

Disclosure Element	<i>AC Strength</i>	No CAM	Short CAM	Long CAM	p-value of planned contrast <sup>h</sup> (1-tailed)
FS Amount <sup>a</sup>	Strong	7.55	7.56	8.15	.414
	Moderate	7.76	8.08	8.11	
Range <sup>b</sup>	Strong	4.27	4.44	6.00	<b>.082</b>
	Moderate	4.68	4.68	4.84	
Rationale <sup>c</sup>	Strong	4.32	4.36	5.69	.234
	Moderate	5.04	4.56	5.37	
Key Assumption <sup>d</sup>	Strong	4.14	4.28	6.27	<b>.010</b>
	Moderate	4.16	4.56	4.68	
Uncertainty <sup>e</sup>	Strong	8.23	7.84	8.08	.432
	Moderate	7.84	8.40	8.05	
Sensitivity <sup>f</sup>	Strong	5.00	4.24	6.25	<b>.029</b>
	Moderate	5.28	3.84	3.95	
Mean of Elements <sup>g</sup>	Strong	5.58	5.45	6.74	<b>.036</b>
	Moderate	5.79	5.69	5.83	

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.

<sup>a</sup>FS Amount - the amounts reported in the financial statements regarding the company's warranty estimate.

<sup>b</sup>Range - the range of the company's warranty estimate.

<sup>c</sup>Rationale - the rationale for the recorded amount.

<sup>d</sup>Key Assumption - a description of the key uncertain assumption in the warranty estimate.

<sup>e</sup>Uncertainty - a description of uncertainty in the estimate.

<sup>f</sup>Sensitivity - a sensitivity analysis of the warranty estimate based on movement in the key uncertain assumption.

<sup>g</sup>Mean of Elements – The mean of the preceding six disclosure elements.

<sup>h</sup>Contrast coefficients were -1 for Strong AC/No CAM, +2 for Strong AC/ Short CAM, +5 for Strong AC/Long CAM, -3 for Moderate AC/No CAM, -2 for Moderate AC/ Short CAM, and -1 for Moderate AC/Long CAM.

**Table 7 – Summary of Disclosure Element Ratings – Comparison of No CAM and Long CAM conditions**

Disclosure Element	<i>AC Strength</i>	No CAM	Long CAM	p-value of planned contrast <sup>h</sup> (1-tailed)
FS Amount <sup>a</sup>	Strong	7.55	8.15	.291
	Moderate	7.76	8.11	
Range <sup>b</sup>	Strong	4.27	6.00	<b>.052</b>
	Moderate	4.68	4.84	
Rationale <sup>c</sup>	Strong	4.32	5.69	.186
	Moderate	5.04	5.37	
Key Assumption <sup>d</sup>	Strong	4.14	6.27	<b>.003</b>
	Moderate	4.16	4.68	
Uncertainty <sup>e</sup>	Strong	8.23	8.08	.418
	Moderate	7.84	8.05	
Sensitivity <sup>f</sup>	Strong	5.00	6.25	<b>.030</b>
	Moderate	5.28	3.95	
Mean of Elements <sup>g</sup>	Strong	5.58	6.74	<b>.016</b>
	Moderate	5.79	5.83	

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.

<sup>a</sup>FS Amount - the amounts reported in the financial statements regarding the company's warranty estimate.

<sup>b</sup>Range - the range of the company's warranty estimate.

<sup>c</sup>Rationale - the rationale for the recorded amount.

<sup>d</sup>Key Assumption - a description of the key uncertain assumption in the warranty estimate.

<sup>e</sup>Uncertainty - a description of uncertainty in the estimate.

<sup>f</sup>Sensitivity - a sensitivity analysis of the warranty estimate based on movement in the key uncertain assumption.

<sup>g</sup>Mean of Elements – The mean of the preceding six disclosure elements.

<sup>h</sup>Contrast 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 8 – Summary of Disclosure Element Ratings – Comparison of Short CAM and Long CAM conditions**

Disclosure Element	<i>AC Strength</i>	Short CAM	Long CAM	p-value of planned contrast <sup>h</sup> (1-tailed)
FS Amount <sup>a</sup>	Strong	7.56	8.15	.463
	Moderate	8.08	8.11	
Range <sup>b</sup>	Strong	4.44	6.00	.108
	Moderate	4.68	4.84	
Rationale <sup>c</sup>	Strong	4.36	5.69	.237
	Moderate	4.56	5.37	
Key Assumption <sup>d</sup>	Strong	4.28	6.27	<b>.032</b>
	Moderate	4.56	4.68	
Uncertainty <sup>e</sup>	Strong	7.84	8.08	.321
	Moderate	8.40	8.05	
Sensitivity <sup>f</sup>	Strong	4.24	6.25	<b>.002</b>
	Moderate	3.84	3.95	
Mean of Elements <sup>g</sup>	Strong	5.45	6.74	<b>.038</b>
	Moderate	5.69	5.83	

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.

<sup>a</sup>FS Amount - the amounts reported in the financial statements regarding the company's warranty estimate.

<sup>b</sup>Range - the range of the company's warranty estimate.

<sup>c</sup>Rationale - the rationale for the recorded amount.

<sup>d</sup>Key Assumption - a description of the key uncertain assumption in the warranty estimate.

<sup>e</sup>Uncertainty - a description of uncertainty in the estimate.

<sup>f</sup>Sensitivity - a sensitivity analysis of the warranty estimate based on movement in the key uncertain assumption.

<sup>g</sup>Mean of Elements – The mean of the preceding six disclosure elements.

<sup>h</sup>Contrast 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 9 – Summary of Disclosure Element Ratings – Comparison of No CAM and Short CAM conditions**

Disclosure Element	<i>AC Strength</i>	No CAM	Short CAM	p-value of planned contrast <sup>h</sup> (2-tailed)
FS Amount <sup>a</sup>	Strong	7.55	7.56	.605
	Moderate	7.76	8.08	
Range <sup>b</sup>	Strong	4.27	4.44	.715
	Moderate	4.68	4.68	
Rationale <sup>c</sup>	Strong	4.32	4.36	.504
	Moderate	5.04	4.56	
Key Assumption <sup>d</sup>	Strong	4.14	4.28	.920
	Moderate	4.16	4.56	
Uncertainty <sup>e</sup>	Strong	8.23	7.84	.788
	Moderate	7.84	8.40	
Sensitivity <sup>f</sup>	Strong	5.00	4.24	.622
	Moderate	5.28	3.84	
Mean of Elements <sup>g</sup>	Strong	5.58	5.45	.505
	Moderate	5.79	5.69	

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.

<sup>a</sup>FS Amount - the amounts reported in the financial statements regarding the company's warranty estimate.

<sup>b</sup>Range - the range of the company's warranty estimate.

<sup>c</sup>Rationale - the rationale for the recorded amount.

<sup>d</sup>Key Assumption - a description of the key uncertain assumption in the warranty estimate.

<sup>e</sup>Uncertainty - a description of uncertainty in the estimate.

<sup>f</sup>Sensitivity - a sensitivity analysis of the warranty estimate based on movement in the key uncertain assumption.

<sup>g</sup>Mean of Elements – The mean of the preceding six disclosure elements.

<sup>h</sup>Contrast 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.