The Disclaimer Effect of Disclosing Critical Audit Matters in the Auditor’s Report

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Abstract

Will disclosing critical audit matters (CAMs) in the auditor’s report, as the U.S. Public Company Accounting Oversight Board (PCAOB) has recently proposed, affect perceived audit assurance and auditor responsibility for misstatements? The answer is important because an increase in perceived assurance and responsibility would imply greater legal exposure for auditors, while a decrease would imply that CAMs act as a partial disclaimer of auditor responsibility. Using the CAM disclosure wording proposed by the PCAOB (2013), we conduct an experiment that finds evidence consistent with a disclaimer effect. Specifically, identifying an audit area as a CAM reduces perceived assurance in that area and lowers perceived auditor responsibility in the event of a misstatement subsequently discovered in that area. Surprisingly, these findings arise whether or not the CAM disclosure also discloses CAM-related audit procedures. Insofar as the PCAOB’s proposal warns auditors against using CAM wording to disclaim responsibility, the fact that we observe such an effect from the PCAOB’s suggested wording for CAM disclosures suggests a potential unintended consequence of the proposed standard that warrants further consideration.

Key words: PCAOB, audit reporting, critical audit matters, auditor litigation
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1. Introduction

The U.S. Public Company Accounting Oversight Board (PCAOB) has proposed to expand the auditor’s reporting model by requiring auditors to disclose “critical audit matters” (hereafter, CAMs), defined as “matters that 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, p. 6]). As characterized by one of the Big-Four public accounting firms, the PCAOB’s proposal is arguably “the most significant expansion of tailored information provided about a financial statement audit by auditors to the user community in the profession’s history” (Zietsman, Burns, Pruitt, and Simer [2013]). To the extent that auditing facilitates the efficient flow of resources in capital markets, changes to the auditor’s primary communication vehicle have potentially significant capital market implications.

While financial statement users could potentially benefit from information about CAMs, concerns have been raised that CAM disclosures could be misinterpreted to imply “piecemeal” assurance, meaning different levels of assurance in different areas of the financial statements (e.g., Ernst & Young [2013], KPMG [2013]. Tysiac [2013]). In turn, the perception of piecemeal assurance could imply different levels of perceived auditor responsibility if a material misstatement is discovered later. To investigate these concerns, we use an experimental approach to examine the effect of CAM disclosures on perceptions of auditor assurance, as well as perceptions of the auditor’s responsibility and liability for a material misstatement subsequently discovered in the CAM area.
In principle, auditors provide the same reasonable assurance for CAM areas as they provide for other financial statement areas, tailoring the nature and extent of audit procedures to compensate for any increased difficulty and subjectivity. However, there is no guarantee that financial statement users will interpret CAM disclosures in a manner consistent with this reasoning. In particular, highlighting a financial statement area as being “critical” to the audit, especially with additional disclosure of the related audit procedures performed, could make that area appear to have more assurance than other areas of the audit. Such disclosures could also be perceived as elevating the auditor’s responsibility for that financial statement area, potentially increasing the auditor’s liability in the event that a material misstatement is subsequently discovered in that area. In particular, CAM disclosures create the potential for counterfactual reasoning of what the auditor “should have known” about any misstatement, given the expanded attention directed to the CAM area.

While audit firms are concerned that any sense of a “piecemeal opinion” from the PCAOB’s proposal could elevate the auditor’s legal exposure in CAM areas, the opposite effect is also possible if users interpret CAM disclosures as disclaimers of responsibility. Along this line, the PCAOB warns auditors against describing CAMs with language “that could be viewed as disclaiming, qualifying, restricting, or minimizing the auditor’s responsibility for the CAM” (PCAOB [2013, p. A1-9]). Yet, the PCAOB’s own definition of a CAM and suggested wording for CAM disclosures could provide the very language the Board cautions against. Specifically, describing a CAM in terms of “difficult, subjective, or complex auditor judgments” could lead users to interpret a CAM disclosure as a warning of the limitations associated with auditing an inherently difficult area, thus prompting lower perceived assurance and lower auditor responsibility if a misstatement is subsequently discovered in that area. By way of analogy, just
as the disclaimers on the backs of parking garage tickets state that the garage operator cannot be held responsible for thefts and damages beyond the operator’s reasonable control, CAMs could be interpreted as disclaiming responsibility for the most subjective parts of financial statements that are beyond the auditor’s reasonable control.

To investigate our research question, we conduct an experiment with 179 MBA student volunteers. Participants view an auditor’s report that discloses a CAM that is or is not in the area of a subsequently discovered material misstatement. We also manipulate whether the report discloses the specific audit procedures performed to address the CAM, which the PCAOB’s 2013 proposal allows but does not mandate. To this basic $2 \times 2$ factorial design (i.e., a CAM disclosure that matches or does not match the area of a misstatement and that does or does not disclose specific audit procedures), we append two control conditions: (1) an auditor’s report under the current reporting regime that does not mandate CAM disclosures, and (2) an auditor’s report under the PCAOB’s CAM proposal but for which the auditor’s judgment is that no CAMs are present. After reading the auditor’s report, participants respond to experimental questions eliciting the perceived level of audit assurance in various financial statement areas. Participants are then notified of a material misstatement in one of these areas and assess the auditor’s responsibility and liability for that misstatement.

Our findings present a consistent theme: CAM disclosures using the PCAOB’s suggested wording decrease perceived assurance in the area disclosed as a CAM, thereby also lowering the auditor’s perceived responsibility and liability for a material misstatement subsequently discovered in the CAM area. The likely explanation is that users perceive the CAM wording as a warning of the difficulty and subjectivity associated with the CAM, thereby partially indemnifying the auditor from responsibility for problems in that area. Users perceive
significantly lower assurance for a financial statement area identified as a CAM than when the auditor’s report identifies a different area as a CAM or in either of the two control conditions with no CAMs identified. For auditor responsibility and liability, users hold the auditor significantly less accountable when a misstatement aligns with a disclosed CAM than when the auditor identifies a different area as a CAM. Post-experimental questionnaire responses indicate that participants tend to believe that the auditor is more competent, more credible, and that the level of disclosure in the auditor’s report is more sufficient when a disclosed CAM matches the area of a misstatement, as if the auditor has given due warning.

We do not discern a statistically significant difference for perceived auditor responsibility or liability for a misstatement discovered in an area disclosed as a CAM when compared to either of the control conditions with no CAMs identified, as responsibility and liability scores in the control conditions fall in between the scores for the CAM disclosure conditions that either do or do not match the area of the misstatement. One plausible explanation is that our primary comparison between the CAM match and no-match conditions reflects both a warning effect that lowers perceived responsibility when the CAM matches the misstatement and a penalty for focusing on the “wrong” area when the CAM does not match the misstatement. If so, we lack sufficient statistical power to separately identify these effects relative to our no-CAM control conditions, although the combined effect is statistically significant when comparing the match vs. no-match conditions. At a minimum, we can say that identifying an area as a CAM does not appear to increase perceived auditor assurance or responsibility for a misstatement relative to our no-CAM controls, as the directional difference runs in the opposite direction, and is statistically significant for the test of perceived audit assurance.
Our results do not depend on the presence or absence of additional wording in the CAM disclosure to describe the specific audit procedures used to address the CAM. Accordingly, our findings provide no evidence that disclosed audit procedures prompt counterfactual reasoning of what the auditor “should have known” about the CAM, given the procedures employed. Consistent with recent experimental findings by Sirois, Bédard, and Bera [2014] and Vera-Muñoz, Gaynor, McDaniel, and Kinney [2014] in different settings, users appear reluctant to discern different levels of audit assurance from disclosed audit procedures – perhaps due to unfamiliarity with what procedures the auditor should perform. In our setting, participants appear aware of the disclosed procedures (as is evidenced by their responses to a manipulation-check question), but this awareness does not impact their tendency to view a CAM disclosure as a partial disclaimer of auditor responsibility for the area identified as a CAM.

We acknowledge multiple concurrent experimental working papers that overlap with ours to varying degrees regarding the effects of CAM (or similar) disclosures on perceived auditor liability for a misstatement (Backof, Bowlin, and Goodson [2014], Brasel, Doxey, Grenier, and Reffett [2014], Brown, Majors, and Peecher [2014], Gimbar, Hansen, and Ozlanski [2014]). The primary feature that differentiates our study is that we adhere as closely as possible to the PCAOB’s [2013] proposed wording for CAM disclosures, including the specific CAM examples provided in Appendix 5 to the PCAOB’s [2013] proposal. Also, rather than taking a strict ex post perspective of assessed auditor negligence by prospective jurors, we adopt an ex ante perspective of perceived audit assurance before a misstatement is revealed, followed by assessments of auditor responsibility after the discovery of a misstatement that does or does not match the area of a previously disclosed CAM. In this manner, our study is more consistent with judgments of whether or not to initiate litigation against an auditor, rather than assessing the resolution of
litigation after a suit has been filed. This feature explains why we restrict our experimental materials to information that would be available in the public domain (i.e., the auditor’s report), without additional disclosures of items that would be revealed in legal discovery, such as communications with the audit committee and documentation in the auditor’s working papers.

Notwithstanding these differences, it is noteworthy that Brasel et al. [2014] and Brown et al. [2014] reach similar conclusions about CAM-related disclosures lowering perceived auditor liability in litigation resolution settings patterned after the case materials originally developed by Kadous [2000]. From a policy perspective, there is synergy when multiple independent efforts take different approaches with different participant pools and different materials but reach similar conclusions, as is the case for the support these studies give to the “disclaimer effect” of CAM disclosures. This conclusion is not universal, as Backof et al. [2014] and Gimbar et al. [2014] find some evidence that CAM disclosures can be harmful to auditors, albeit with stronger wording in the instructional materials that could be more likely to elicit a negative response. On balance, research is proceeding as it should in an area of timely interest, with various ongoing efforts that should ultimately paint a clearer picture about the effects of CAM disclosures than that available from any single study in isolation.

Overall, our findings suggest the potential for unintended consequences from the PCAOB’s proposed CAM standard. For audit firms, we find that CAM disclosures in the auditor’s report can lead to less perceived auditor responsibility for a misstatement in the area identified as a CAM. For the PCAOB, our findings are consistent with the PCAOB’s concern about CAM language “that could be viewed as disclaiming, qualifying, restricting or minimizing the auditor’s responsibility for the CAM” (PCAOB [2013, p. A1-9]). The irony in this finding is that we detect it using the PCAOB’s own suggested wording for CAM disclosures. To the extent
that our findings generalize, an implication is that auditors could become tempted to disclose numerous CAMs, pointing out the difficulty and subjectivity involved in auditing any number of areas. If so, audit reports could evolve to lengthy legal documents of multiple CAM-related disclosures that are prompted by the firms’ legal counsel, much in the same spirit as the lengthy “terms and conditions” agreements that users must acknowledge when installing computer software. If so, the auditor’s essential message could become diluted, consistent with the recent findings of Sirois et al. [2014], who report that investors perceive audit reports to be less informative when an auditor discloses multiple CAMs. PCAOB Chair James Doty has stated, “No one wants to return to the days before the pass-fail model was instituted, when auditors’ free-writing could obscure a disclaimer of assurance on misleading financial statements” (Cohn [2014, p. 1]). Yet, our results suggest that exactly this sort of unwieldy auditor reporting could result from a CAM-based disclosure regime that users interpret as fair warning of the difficulty and subjectivity inherent in many areas of contemporary auditing.

Section 2 describes the regulatory background for our study and develops a theory-based rationale for the hypotheses we test. Section 3 describes the sample and research design. Section 4 presents our results. Section 5 concludes.

2. Background and Development of Hypotheses

2.1 Regulatory Background

Concerns about the boilerplate nature of the audit opinion and a growing belief that a communication gap exists between financial statement users and auditors has led standard-setters worldwide to consider changing the auditor’s reporting model (PCAOB [2013], FRC [2013], IAASB [2013]). After two years of outreach efforts, the PCAOB recently proposed a new standard for audits of publicly traded companies in the U.S. that would require auditors to
communicate “critical audit matters” (CAMs) in the auditor’s report, defining CAMs as “matters that 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, p. 6]). Quoting from PCAOB Chief Auditor Martin F. Baumann, “Communicating critical audit matters in the auditor’s report will make the report more informative, thereby increasing its relevance and usefulness to investors and other financial statement users” (Cohn [2013, p. 1]).

2.2 EFFECT OF CAM DISCLOSURES ON PERCEIVED ASSURANCE

Although CAM disclosures in the auditor’s report provide client-specific information about the audit that goes beyond a one-size-fits-all boilerplate opinion, it is unclear whether any decision usefulness from this additional information would translate to different assessments of auditor assurance and/or variation in perceived auditor responsibility and liability for material misstatements that could arise in CAM areas. We begin with the assurance question, as differences in perceived assurance are a likely precursor to any subsequent differences in perceived auditor responsibility and liability for misstatements.

A recent experiment by Christensen, Glover, and Wolfe [2014] offers insights on the effects of CAM disclosures on participants’ willingness to invest, a construct similar to perceived assurance. Specifically, Christensen et al. [2014] find that an early version of CAM-like wording (i.e., before the specific wording outlined in the PCAOB’s 2013 proposal) decreases users’ willingness to invest, with financial statement users proxied in their study by experimental volunteers solicited from a business school alumni database. However, the wording examined by Christensen et al. [2014] could lead to important differences in emphasis from the wording later proposed by the PCAOB [2013], not the least of which is the word “critical” itself. In their CAM
treatment condition, Christensen et al.’s [2014] experimental materials emphasize the estimation uncertainty associated with a Company’s investment income account, but they do not explicitly identify the account as a “critical audit matter.” Behaviorally, identifying a financial statement area as “critical” to the audit could imply a particularly important area to which the auditor must carefully attend. To the extent that users infer greater auditor attention to areas labeled as being “critical,” the level of perceived assurance could increase rather than decrease. This possibility appears to be at the heart of the concern expressed by audit firms that CAM disclosures could lead to “piecemeal” audit opinions, with the potential to suggest an increased level of assurance in “critical” areas (e.g., Ernst & Young [2013], KPMG [2013], Tysiac [2013]).

Conversely, the reasoning provided by Christensen et al. [2014] for their findings could also apply, even with the more stringent wording proposed by the PCAOB [2013] that we examine in our experiment. The likely reason why Christensen et al.’s [2014] experimental participants indicated a lower willingness to invest in a company associated with a CAM disclosure in the auditor’s report is that participants were leery of the “high estimation uncertainty” associated with investment income, such that “the reasonable range of possible values for investment income as of the reporting date exceeds materiality, potentially by multiples of materiality” (quoted from the experimental materials in the Appendix to Christensen et al. [2014]). The tenor of the wording in the CAM disclosure examples suggested by the PCAOB in its 2013 proposal is not as strong as that examined by Christensen et al. [2014], and does not refer to estimation errors that could exceed the range of materiality. Nevertheless, the PCAOB wording still notes that a CAM requires the auditor to exercise “difficult and complex judgments.” Although we elicit participants’ perceptions of audit assurance rather than Christensen et al.’s [2014] elicitation of participants’ willingness to invest, these measures likely
capture a similar conceptual construct. To the extent that Christensen et al.’s [2014] findings extend to a more direct measure of perceived audit assurance and to the more nuanced disclosure wording proposed by the PCAOB [2013], CAM disclosures could potentially lower users’ assessments of the level of audit assurance provided.

Given the *ex ante* possibilities that the CAM disclosures illustrated by the PCAOB could increase or decrease perceived assurance, we test the following null hypothesis against a two-tailed alternative:

**H1a**: A CAM disclosure in the auditor’s report will not influence the level of perceived user assurance in the financial statement area identified as a CAM, relative to the assurance perceived in a comparable area not identified as a CAM.

2.3 EFFECT OF CAM DISCLOSURES ON PERCEIVED AUDITOR RESPONSIBILITY AND LIABILITY FOR A MISSTATEMENT

Our primary research objective goes beyond Christensen et al. (2014) to examine the implications of CAM disclosure in the auditor’s report on perceived auditor responsibility and liability for a material misstatement that is subsequently discovered in the CAM area. We draw on culpable control theory (Alicke [2000], Alicke, Buckingham, Zell, and Davis [2008]) to guide our reasoning. Culpable control theory links the behavioral phenomena of hindsight bias and counterfactual reasoning to explain when individuals assign blame to others for harmful outcomes. The theory asserts that harmful outcomes that could have been avoided lead to negative affect, but whether or not such reactions translate to blame depends on perceptions of whether or not the actor in question exercised appropriate control. In an audit setting, culpable control theory suggests that an auditor can avoid liability for a misstatement if users perceive that the auditor took reasonable precautions to prevent the loss. For example, Lowe, Reckers, and Whitecotton [2002] find that auditors can reduce liability by following the recommendations of a reliable decision aid.
Similar to perceived assurance, if a material misstatement is discovered, it is unclear *ex ante* whether a CAM disclosure in the area of the misstatement would challenge or buttress the belief that an auditor exercised reasonable care. Although theory suggests that a reasonable-care standard is pivotal to how individuals assign blame for negative outcomes, the specific CAM-disclosure wording proposed by the PCAOB conveys potentially mixed messages, such that the effect of this wording is an empirical question. On one hand, identifying an area as being “critical” to the audit implies a high level of expected auditor diligence, potentially undermining the auditor’s perceived defense if a misstatement occurs in an area that the audit firm itself has represented as being of utmost importance. Consistent with this view, in an April 2014 PCAOB Roundtable discussion, University of Chicago Professor Douglas Skinner conjectured that, as a consequence of “expanding the auditor’s role and disclosures in the manner envisioned in these proposals, I think we can confidently predict that the plaintiff’s bar will not have to work very hard to expand both the extent to which auditors are held liable for client firm problems and the magnitude of the associated damage claims” (Cohn [2014, p. 3]).

Similarly, explicit disclosures by the auditor can suggest in hindsight what the auditor “should have known,” given the documented actions (Creyer and Gurhan [1997]). For example, Reffett [2010] finds that experimental participants are more willing to blame the auditor for an undetected fraud when the audit working paper documentation identifies specific fraud risks that subsequently materialize. Contrary to the adage that “ignorance is no excuse,” it would seem that auditors can indeed be better off simply by not calling attention to a problem area, and hence not prompting users (and plaintiffs) to reason *ex post* what the auditor should have known. From this perspective, CAM disclosures document the auditor’s awareness of the CAM, potentially elevating user expectations of auditor responsibility for the CAM.
Conversely, just as a CAM disclosure could lower perceived assurance if it is perceived as emphasizing the uncertainty associated with the CAM (Christensen et al. [2014]), it is also possible that a CAM disclosure could lower perceived auditor responsibility and liability for a material misstatement in the CAM area if users interpret the disclosure as a fair warning of the limitations associated with auditing the CAM. In reconciling this possibility to the counterfactual reasoning detected by Reffett [2010], an important distinction is that CAM disclosures are in a public document (i.e., the auditor’s report), whereas the fraud risk documentation examined by Reffett [2010] was in the audit working papers, available only through legal discovery. Accordingly, a public CAM disclosure could be perceived by users as a partial disclaimer of responsibility, clarifying the reasonable boundaries of what an audit can and cannot achieve in a highly difficult and subjective area. For example, a recent Financial Times article about a misstatement of commercial income at the U.K. grocery chain Tesco refers to the enhanced auditor’s reporting requirements already implemented in the U.K. (Barrett, Agnew, and Felsted [2014]). Observing that the auditor’s report for Tesco highlighted commercial income as an area of audit focus due to the “judgment required in accounting for the commercial income and the risk of manipulation,” Barrett et al. [2014] quote from an unnamed accounting expert’s assessment that “it’s clearly a bit embarrassing for the auditor, but they’ll be able to say that they knew this was a risk and said so in their auditor’s report.”

Interestingly, the PCAOB itself has expressed concern about the potential for CAM disclosures to become disclaimers of responsibility, warning auditors against using CAM language “that could be viewed as disclaiming, qualifying, restricting or minimizing the auditor’s responsibility for the CAM” (PCAOB [2013, p. A1-9]). What the PCAOB does not address, however, is the possibility that its own suggested language could have such an effect. Namely,
defining a CAM in the auditor’s report as a matter involving particularly “difficult, subjective, or complex auditor judgments” (PCAOB [2013, p. 6]) could be perceived as emphasizing the limitations of an audit. By way of analogy, drivers expect parking garage operators to take reasonable precautions, such as monitored gates at the entrance and exit points, as well as good lighting. But one cannot reasonably expect the garage operator to monitor all parked vehicles at all times, such that parking tickets routinely disclaim operator responsibility for theft. In a similar manner, it is possible from a culpable control perspective that CAM disclosures, rather than elevating auditor responsibility, could be interpreted as delineating the boundaries of the reasonable precautions that an auditor can realistically be expected to provide. If so, auditors could face lower responsibility and liability for a misstatement in a CAM area than for other misstatements. We again address both sides of the question by testing the following null hypotheses against their two-tailed alternatives. Although auditor responsibility and auditor liability are closely related constructs, we hypothesize and test both measures to provide corroborating evidence.

**H1b:** A CAM disclosure in the auditor’s report will not influence the level of perceived auditor responsibility for a material misstatement subsequently discovered in the financial statement area identified as a CAM, relative to the perceived auditor responsibility for a material misstatement subsequently discovered in a comparable area not identified as a CAM.

**H1c:** A CAM disclosure in the auditor’s report will not influence the level of perceived auditor liability for a material misstatement subsequently discovered in the financial statement area identified as a CAM, relative to the perceived auditor liability for a material misstatement subsequently discovered in a comparable area not identified as a CAM.

### 2.4 Effect of Disclosing Audit Procedures for a CAM on Perceived Assurance

Similar to other areas of an audit, auditors must determine the appropriate nature and extent of audit procedures necessary to attain reasonable assurance for a CAM. However, unlike
other areas of the audit, the PCAOB’s proposal gives auditors the option, but not the mandate, to *disclose* specific audit procedures for a CAM. In other words, the PCAOB proposal allows auditors to describe how assurance on a CAM was obtained. In commenting on the similar consideration of disclosed audit procedures for key auditing matters by the audit regulator in the U.K., the Financial Reporting Council (FRC), Singh [2013] quotes from FRC Chair Nick Land’s assertion that “the provision of a fuller description of the work the auditor has undertaken will give far more insight to investors than the binary pass/fail model of the current audit report.” Thus, we turn to the open question of what effect disclosed audit procedures might have on user perceptions of audit assurance for a CAM.

Relative to a CAM disclosure with no procedures indicated, disclosing specific CAM-related audit procedures in the auditor’s report could increase the level of audit assurance that users perceive if such a disclosure convinces users that the auditor has compensated for the difficulty and subjectivity of a CAM. Christensen et al. [2014] find some evidence consistent with this reasoning, although their design simultaneously manipulates (1) the explicit level of stated audit assurance in the CAM area, and (2) a summary of the audit procedures applied to that area. Accordingly, to the extent that Christensen et al. [2014] find that this combined manipulation (what they term a “resolution paragraph”) mitigates the tendency of their experimental participants to lower investments due to a CAM disclosure, this finding could be due to the stated level of audit assurance, the documentation of audit procedures, or both. Consistent with the PCAOB’s guidance, we control for this issue by not including explicit wording on the assurance provided for the CAM. Instead, we manipulate the presence or absence of additional wording that describes the auditor’s procedures applies to the CAM, adapted from the PCAOB’s [2013] suggested examples.
Although it might seem that disclosing audit procedures could only elevate user expectations of the level of audit assurance provided, the effect of such disclosures is not self-evident. In a recent experimental study, Vera-Muñoz et al. [2014] find that users do not discern different levels of assurance even from seemingly rudimentary disclosures of the procedures applied in an environmental sustainability reporting engagement. While the reasonable-assurance standard in auditing may seem obvious to trained professionals in the discipline, discerning the audit procedures necessary to attain reasonable assurance is likely a more subtle and difficult exercise when examined by the untrained eye. Accordingly, as with our other hypotheses, we state the hypothesis for the effect of disclosed procedures on perceived audit assurance in the null form:

\[ H_{2a}: \text{Disclosure in the auditor’s report of the audit procedures applied to a CAM will not influence the level of perceived user assurance in the financial statement area identified as a CAM.} \]

2.5 EFFECT OF DISCLOSING AUDIT PROCEDURES FOR A CAM ON PERCEIVED AUDITOR RESPONSIBILITY AND LIABILITY FOR A MISSTATEMENT

If a material misstatement occurs in an area that the auditor has previously identified as a CAM, the additional disclosure of corresponding audit procedures could magnify the sense that the auditor “should have known” about the misstatement, given the procedures employed. This possibility has led audit firms to express concern that disclosures of audit procedures could increase the auditor’s litigation risk (Zietsman et al. [2014]). As stated by Deloitte & Touche [2013, p. 13], “Plaintiffs will use descriptions of an auditor’s procedures in its CAM disclosures to try and plead around the strict requirements of the PSLRA and federal jurisprudence that has interpreted it.” Perhaps in reaction to these concerns, the PCAOB’s 2013 proposal stops short of mandating the inclusion of information on audit procedures in CAM disclosures, although the
proposal allows this additional disclosure and suggests wording in its illustrative examples that could be used to provide it.

While it is possible that disclosing audit procedures could exacerbate judgments made in hindsight of what the auditor “should have known,” it is also possible from the perspective of culpable control theory that carefully described audit procedures could convey the sense that the auditor took reasonable precautions to address the risks faced. For example, Backof [2013, p. 4] finds from a recent experiment that participants in the role of jurors perceive a misstatement to be “more foreseeable when auditors document their consideration of the accounting alternatives,” but she also finds that this effect reverses when the working paper documentation “explicitly links the audit risks to the work performed.” As Backof [2013, p. 4] explains, participants appear willing to assign less culpability to the auditor if the audit documentation presents a convincing case that the auditor made “an effort to evaluate all available evidence at the time of the audit” and followed “the prescribed risk-based audit approach despite reaching what the future proves to be the incorrect conclusion.”

Both Backof [2013] and the Reffett [2010] experiment mentioned earlier examine inferences drawn from audit working paper documentation, whereas our focus is on public disclosures made in the auditor’s report. In a concurrent study of ex post juror liability assessments against auditors, Backof et al. [2014] claim some evidence that combining a CAM-related disclosure in the auditor’s report with disclosed audit procedures can elevate the auditor’s exposure for a misstatement in the CAM area, but their manipulated CAM wording is stronger than that proposed by the PCAOB [2013], potentially priming their participants to think about misstatement risk in ways that would be more likely to elicit a negative response. As with our other hypotheses, the effect of disclosing the audit procedures applied to a CAM under the
PCAOB’s [2013] proposal on perceived auditor responsibility and liability for a misstatement in the CAM area is ultimately an empirical question, for which we state our final hypotheses below in the null form:

**H2b:** Disclosure in the auditor’s report of the audit procedures applied to a CAM will not influence the level of perceived auditor responsibility for a subsequently discovered material misstatement.

**H2c:** Disclosure in the auditor’s report of the audit procedures applied to a CAM will not influence the level of perceived auditor liability for a subsequently discovered material misstatement.

### 2.6 INTERACTION BETWEEN CAM DISCLOSURE AND DISCLOSED AUDIT PROCEDURES

Together, our two sets of hypotheses imply a $2 \times 2$ experimental design to examine the main effects of disclosing a CAM in a particular area (as tested by $H1a$, $H1b$, and $H1c$) and whether or not that disclosure also includes a description of the audit procedures corresponding to the CAM (as tested by $H2a$, $H2b$, and $H2c$). Given the *ex ante* uncertainty in stating directional predictions for these main effects, we do not separately hypothesize how they might interact. Nevertheless, we include a test for interaction in our plan of analysis.

### 2.7 NO-CAM BASELINES

As explained shortly, we test our primary hypotheses with an experimental design that manipulates the *area* of a CAM disclosure rather than the *presence* of a CAM disclosure. While this design feature enables a sharper focus on the influence of a CAM disclosure on a particular financial statement area, a full understanding of the PCAOB’s proposal makes it important to also compare our inferences to a setting with no CAMs. As stated by Cindy Fornelli, executive director of the Center for Audit Quality (CAQ), “The more that you disclose, in our litigious environment, sometimes the more exposure you have” (Tysiac [2013, p. 1]), suggesting that *any* change to the auditor’s reporting model could increase auditor exposure. To address this
possibility and corroborate our primary results, we append two baseline conditions to our basic
design – one in which the PCAOB’s proposal applies but the auditor discloses that no CAMs are
present, and another than represents current practice, in which the auditor’s report does not refer
to CAMs. We then test comparisons of our CAM conditions to these control conditions in
supplemental analyses.
3. Experimental Task and Design
3.1 PARTICIPANTS AND TASK
We recruited 179 MBA student volunteers from a top-20 MBA program to participate in
the study. MBA students confer the advantages of a reasonable degree of business experience
and training, including a basic familiarity with financial statements, thereby enabling them to
proxy for informed nonprofessional investors in providing us with assessments of perceived
assurance. At the same time, MBA students are mostly independent of the accounting and
auditing professions, and hence can provide the dispassionate lay perspective that attorneys
would consider in contemplating likely juror reactions when considering whether to initiate legal
action.\(^1\) Participants were asked to arrive at a specified location during a time block that we
designated for the study, in exchange for $15 cash compensation and a random chance at three
larger cash stipends. The email recruiting narrative identified the study as accounting research
about “some simple information from an audit report,” but did not mention anything about the
PCAOB or its CAM proposal.

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\(^1\) We interviewed a business law professor who supported our reasoning, observing that “most lawyers don’t know a
lot about accounting, so their reactions would likely mirror the lay persons who populate the jury box.” To be sure,
MBA students would likely have more business expertise than would the typical juror, but this expertise furthers our
goal of eliciting informed assessments of the audit assurance provided in a CAM-disclosed area. In their concurrent
study, Brasel et al. [2014] recruit participants from Amazon’s Mechanical Turk (AMT). Brown et al. [2014] use
AMT participants in addition to law students. They report differences between these participant pools for their
manipulation of an auditor “judgment rule,” which we do not consider, but not for the effect of CAM disclosures on
auditor liability assessments. We complement these studies by eliciting judgments from MBA students who have
some business expertise but who are also reasonably independent of the accounting and auditing professions.
Table 1 reports demographic information, indicating that our participants have an average of 5.25 years of work experience, ranging from 1 to 11 years, and rate their familiarity with financial statement audits at an average of 4.63 on an 11-point (i.e., 0 to 10) scale. Post-experimental questions eliciting self-reported areas of expertise indicate that 23 percent of our participants have accounting expertise and 5 percent have auditing expertise. Robustness tests (untabulated) find no evidence that our results are significantly influenced by the subset of our participants with accounting or auditing expertise.

Upon arrival at a controlled laboratory setting, participants in all conditions read the same background material about a hypothetical company (see Appendix), including a list of four financial statement risks facing the company that could be relevant to the audit. The second and third items in the list of risks pertained to items that we manipulated later as CAM disclosures in the auditor’s report. Accordingly, the subsequent CAM disclosures provided the auditor’s CAM assessments without adding any new information about the underlying financial statement risks.

After reading the background material, participants were presented with the auditor’s report. Across conditions, the report began with the standard wording for an unqualified auditor’s report from current practice. On the following page, the report continued with CAM-disclosure variations to test our hypotheses, as described below. Participants then responded to experimental questions eliciting the perceived level of audit assurance in various areas. Thus, the assurance questions elicit participants’ *ex ante* judgments about perceived assurance, before any misstatement is revealed. After answering these questions, participants turned to the next part of the experimental materials that informed them of a material misstatement affecting investments in financial instruments or sales returns (not both), with half of the participants assigned to each version. Participants then completed the experiment by
providing assessments of auditor responsibility and liability for the misstatement, followed by a
variety of post-experimental, manipulation check, and demographic questions. The Appendix
reproduces the experimental materials.

3.2 EXPERIMENTAL DESIGN

We felt it important to separate the effect of a CAM disclosure on user judgments
involving the particular financial statement area disclosed as a CAM from the more general
effect of providing any CAM disclosure. Accordingly, the first experimental manipulation in our
primary 2 × 2 design (i.e., before adding the two control conditions, discussed later) is whether
the auditor’s report discloses a CAM related to the fair value of the Company’s investments in
financial instruments or to its sales returns. We pattern the wording of both disclosures after
eamples suggested by the PCAOB [2013, Appendix 5], with minor adaptations intended to
make the two CAM disclosures as parallel as possible. With this approach, we are able to test
H1a by comparing participants’ perceived assurance in the area disclosed as a CAM (i.e., either
investments or sales returns) against perceived assurance in the other area that is not disclosed as
a CAM. Counterbalancing the materials by seeding half of the CAM disclosures in each area
ensures by design that this comparison captures the effect of eliciting assurance in the CAM area,
without the potentially confounding influence of any systematic difference in perceived
assurance between investments in financial instruments and sales returns. In addition, we
include an indicator for the investments CAM as a control variable in our statistical analyses.

Similar reasoning applies to our tests of perceived auditor responsibility (H1b) and
liability (H1c) for a material misstatement. As noted previously, half of our participants are
informed after providing their assurance assessments that a material misstatement occurred in the

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2 We counterbalance the order of the perceived assurance questions for financial instruments and sales returns. A
supplemental analysis (untabulated) indicates that this ordering has no discernable effect.
investments area, with the other half informed that a material misstatement occurred in the Company’s sales returns. Accordingly, our CAM manipulation ensures that half of the participants observe a misstatement in the area identified as a CAM (either investments or sales returns), whereas the other half observe a material misstatement in the other area that the auditor did not identify as a CAM. As with our tests of perceived assurance, this design feature captures the effect of matching the area of the CAM with the area of the misstatement, without any potentially confounding influence of systematic differences in perceived auditor responsibility and liability for investments in financial instruments vis-à-vis sales returns, although we again include a covariate for the investments CAM as a statistical control.

To enable tests of H2a, H2b, and H2c, the second manipulated factor in our primary 2 × 2 design is the presence or absence of an additional paragraph to describe the audit procedures employed in the area identified as a CAM, which we pattern after the suggested wording in the examples provided by the PCAOB [2013, Appendix 5] for both the financial instruments and sales returns areas that we adapt for experimental testing. This additional paragraph is appended to but does not otherwise modify the basic CAM disclosure paragraph described above.

3.3 ADDITIONAL CONTROL CONDITIONS

As mentioned in the previous section, we append two baseline control conditions to our basic 2 × 2 experimental design to corroborate our findings. First, we operationalize a “no CAM present” control condition in which the auditor’s report describes the auditor’s responsibility to disclose CAMs, as in the other CAM conditions, but states the auditor’s conclusion that “there are no critical audit matters” for this particular company. Second, we operationalize a “current practice” control condition that provides the background materials from the other conditions, but does not mention any auditor responsibility to disclose CAMs in the auditor’s report. Neither of
these additional conditions discloses audit procedures, as the auditor cannot explain the procedures applied to a CAM when no CAM is present.

4. Results

4.1 MANIPULATION CHECKS

All participants except those assigned to the “current practice” control condition answered two post-experimental manipulation check questions, pertaining to (1) whether the auditor’s report identified a CAM regarding the allowance for sales returns, the fair value of investments, or did not identify a CAM, and (2) whether the auditor’s report also disclosed CAM-related audit procedures. Excluding the 29 participants in the “current practice” control condition, 136 of the remaining 150 participants (91 percent) correctly answered the first question on the nature of the CAM disclosure provided, and 124 of 150 (83 percent) correctly answered the second question on whether or not the auditor’s report also described the specific procedures the auditor undertook. Overall, 116 of the 150 participants (77 percent) who answered the manipulation check questions provided correct answers to both questions.

To ensure that our results reflect responses from participants who adequately comprehended the experimental materials, our reported analyses delete all responses from the 34 participants who incorrectly answered one or both manipulation check questions. As a supplemental analysis (untabulated), we repeat all statistical tests to include all experimental participants, obtaining similar statistical conclusions at the same critical significance levels for our tests of perceived assurance and perceived auditor responsibility for a misstatement. The related auditor liability results are directionally consistent in the full sample for the effect of a CAM-matched misstatement, but no longer reach statistical significance at conventional levels

3 We did not ask these questions in the “current practice” control condition because questions about the nature of the CAM disclosure provided in the audit report would likely have been confusing to participants if there is no mention of CAMs in the experimental materials.
(two-tailed $p = 0.13$), likely due to the additional noise induced by participants whose manipulation check responses suggest that they did not understand one or both of the experimental manipulations.

4.2 SUMMARY OF FINDINGS

Across our experimental conditions and different dependent variables, we observe a consistent result: the lowest perceived audit assurance and correspondingly lowest perceived auditor responsibility and liability for a misstatement occur when the financial statement area in question is disclosed in the auditor’s report as a CAM. Thus, in contrast to the PCAOB’s expressed concern that CAM language should not be used as a disclaimer of auditor responsibility (PCAOB [2013, p. A1-9], the PCAOB’s own suggested wording appears to have such an effect. Moreover, this conclusion arises whether or not the CAM disclosure also discloses the audit procedures applied to the CAM, insofar as we do not observe any statistically significant differences attributable to our experimental manipulation of disclosed procedures. This finding is important because it suggests that it would be difficult for auditors to modify user perceptions of CAMs by choosing whether to exercise the PCAOB’s [2013] proposed option to disclose CAM-related audit procedures. Below, we present and tabulate statistical analyses to support these conclusions. The covariate for whether the CAM disclosure is for the fair value of investments or sales returns is not statistically significant in any of our analyses, indicating that the two financial statement areas we chose for CAM matching vs. non-matching are otherwise similar. We do not comment further on this covariate other than to include it in the corresponding tables.
4.3 PERCEIVED ASSURANCE (H1A AND H2A)

Table 2, Panel A presents descriptive statistics for the 11-point (i.e., 0 to 10) Likert-scale questions that elicited participants’ perceived “confidence in the reliability and accuracy of the values reported” for the Company’s recorded fair values of investments or allowance for sales returns, categorized in Panel A by whether the financial statement area of the question matches or does not match with the financial statement area of the CAM disclosure. We refer to these responses as “perceived assurance,” although we did not use the word “assurance” itself in the experimental materials due to concern that this word could have been confusing to participants. Instead, we rely on the IAASB’s [2010, p. 6] definition of “assurance” in terms of the objective to enhance the degree of confidence perceived by the intended users.

Table 2, Panel B reports the statistical results for perceived assurance from an ANOVA applied to our primary 2 × 2 experimental design that manipulates (1) whether the perceived assurance question asks about the financial statement area that matches the area of the CAM disclosure, and (2) whether or not the CAM disclosure also discloses audit procedures. The first factor necessitates some additional explanation, as it involves each participant’s assessments of assurance for two areas (i.e., investments in financial instruments and sales returns), with only one of these areas corresponding to the CAM disclosure. This disclosure, in turn, is counterbalanced between the investments CAM and sales returns CAM. That is, before participants learn of any misstatement, they provide ex ante assurance assessments for the Company’s investments and for its sales returns. One of these assessments matches the CAM area and the other does not. Because each participant provides both assessments, the “CAM match” manipulation for perceived assurance is a within-participants (i.e., repeated measures) factor, and is treated as such in the ANOVA. In other words, “perceived assurance” is the
dependent variable, and whether this response is from the assurance question on the CAM-matched area or on the other area is the within-participants factor. In contrast, the presence or absence of additional disclosure of CAM-related audit procedures in the auditor’s report is a between-participants factor.

Panel A of Table 2 indicates that participants perceived lower assurance on an 11-point Likert scale for the financial statement area matching the CAM disclosure than they perceived for the other area (4.84 vs. 6.34), and Panel B indicates that this difference supports a statistically significant main effect of CAM matching (F = 25.54; p < 0.01). Panel B does not indicate a statistically significant effect of disclosed audit procedures in the CAM area (p = 0.22) or any interaction between the two factors (p = 0.48). Thus, our primary finding from Table 2 is to reject null hypothesis H1a in favor of the alternative conclusion that disclosing a CAM in the auditor’s report lowers users’ perceived assurance for the CAM area, relative to the assurance perceived for a comparable area that is not identified as a CAM. Conversely, we do not reject null hypothesis H2a regarding the effect of disclosing CAM-related audit procedures on perceived assurance.

4.4 PERCEIVED AUDITOR RESPONSIBILITY (H1B AND H2B) AND LIABILITY (H1C AND H2C) FOR A MISSTATEMENT

Table 3, Panel A presents descriptive statistics and Panel B presents ANOVA results for the Likert-scale questions that elicited participants’ perceptions of auditor responsibility for a misstatement revealed to participants after they answered the assurance questions. Table 4 follows a similar structure for the related measure of perceived auditor liability for the misstatement. Because there is only one misstatement that either does or does not match the disclosed CAM area, the ANOVAs for perceived responsibility and liability are more

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4 Given that we test non-directional null hypotheses, all reported p-values are two-tailed.
straightforward than is the case for the ANOVA on perceived assurance. That is, participants answer only one question about auditor responsibility and one question about liability for the financial statement area that is revealed as a material misstatement (either investments or sales returns). These questions, in turn, either match or do not match with the area previously disclosed as a CAM. Accordingly, for auditor responsibility and liability, both “CAM match” and the disclosure of audit procedures are between-participants factors.

Similar to the results for perceived assurance, Table 3 shows a significant main effect of the CAM-match factor on perceived auditor responsibility for the misstatement \( (F = 7.06; p = 0.01) \), with lower perceived responsibility in the matched condition than in the non-matched condition (11-point Likert-scale averages of 5.49 vs. 6.85). Thus, we reject null hypothesis H1b in favor of the alternative conclusion that CAM-disclosure lowers perceived auditor responsibility for a misstatement in the CAM area, relative to perceived auditor responsibility for a misstatement in a comparable area not identified as a CAM. We fail to reject null hypothesis H2b, however, as we find no significant effect of disclosed audit procedures \( (p = 0.31) \), nor do we detect any interaction effect \( (p = 0.89) \).

Table 4 for perceived auditor liability follows a similar pattern, with 11-point Likert scale averages of 4.51 and 5.50 in the matched and non-matched conditions, respectively, although the significance level for the main effect of the CAM-match factor becomes marginal \( (F = 3.14; \text{two-tailed } p = 0.08) \). Again, neither the procedures factor \( (p = 0.52) \) nor the interaction effect \( (p = 0.37) \) approach significance. The apparently weaker significance level for the CAM-match main effect on the liability measure is likely due to the additional complications associated with judgments about litigation such as monetary and/or reputational damages that go beyond direct assessments of auditor responsibility. The increased noisiness of liability assessments is
evidenced by the larger standard deviations in the liability assessments reported in Table 4 relative to the responsibility assessments in Table 3. Overall, we find marginal support to reject null hypothesis H1c in favor of the alternative that CAM disclosure lowers perceived auditor liability for a misstatement, relative to the perceived liability for a misstatement in a comparable area not identified as a CAM. We do not reject null hypothesis H2c regarding any liability effect of additional disclosure regarding audit procedures related to the CAM.

4.5 SUPPLEMENTAL ANALYSES

4.5.1. Additional Control Conditions. In Tables 2, 3, and 4, Panel C reports supplemental comparisons outside our basic $2 \times 2$ factorial design involving the additional baseline conditions we conducted in which the PCAOB’s CAM proposal applies but the auditor concludes that no CAM is present (“no CAM present”) or the PCAOB’s CAM proposal does not apply and the auditor’s report makes no mention of CAMs (“current practice”). Our first conclusion from these supplemental analyses is that the two control conditions do not significantly differ from each other in any of our analyses, such that merely disclosing the expectation to identify CAMs in the auditor’s report does not appear to be of consequence, relative to current practice, if the auditor concludes that no CAM is present. Moreover, the Likert-scale averages in both control conditions consistently lie in between the averages for the CAM-matched and non-matched conditions, whether for perceived assurance (Table 2), auditor responsibility (Table 3), or liability (Table 4).

For perceived assurance, when the assurance question matches the CAM area, average responses remain significantly below the averages for the “no CAM present” control condition ($t = 3.54; p < 0.01$) and the “current practice” condition ($t = 2.81; p = 0.01$). Conversely, the average perceived assurance in the non-matched CAM condition does not significantly differ
from the averages in either of the supplemental control conditions at conventional levels. Thus, relative to a baseline with no CAMs, it appears that CAM disclosure lowers the assurance that financial statement users perceive in the area identified as a CAM.

For perceived auditor responsibility and liability for a misstatement, we are unable to detect statistically significant differences at conventional levels between the control conditions with no CAMs vs. either the matched or non-matched conditions with a CAM identified. Recall, however, that the averages in the control conditions with no CAMs identified consistently lie in between the averages for the matched and non-matched CAM conditions. Thus, relative to the no-CAM controls, it is plausible that a CAM matched with the area of a misstatement acts to lower perceived auditor responsibility or liability for a misstatement as a partial disclaimer effect, whereas a CAM that does not match with the area of a misstatement could act to somewhat heighten auditor responsibility or liability for a misstatement due to the sense that the auditor identified the wrong area as being “critical.” If so, the combined effect of these forces is enough to generate statistical significance, as reported in our primary tests of H1b and H1c, but we may lack the statistical power to detect their individual components relative to the no-CAM baselines. We acknowledge that this reasoning is conjectural. Still, we can at least say that, if a misstatement occurs and an auditor discloses a CAM, our findings suggest that the auditor is likely to be better off from the standpoint of assessed responsibility and liability if the CAM matches the area of the misstatement than if the two areas do not match. As a practical matter, to the extent that the PCAOB’s proposal could compel auditors to disclose CAMs, our findings suggest that auditors will be tempted to disclose many CAMs, using carefully crafted legal language to ensure that they “cover” any area that could subsequently turn out to be misstated.
4.5.2. Post-Experimental Questions. We asked several additional post-experimental questions, but for the sake of brevity we restrict our discussion to three Likert-scale questions that appear to shed insight into our findings. Specifically, after participants learn of a misstatement, they indicate higher assessments of the auditor’s competence (5.48 vs. 4.41; \( p < 0.01 \)), the auditor’s credibility (4.79 vs. 4.17; \( p = 0.08 \)), and of the sufficiency of the auditor’s disclosure (5.28 vs. 4.49; \( p = 0.07 \)) when the misstatement occurs in the same financial statement area as the disclosed CAM.\(^5\) Thus, in the event of a misstatement, it appears that a CAM disclosure related to the misstatement area helps to present the auditor in a more favorable light as being more diligent and forthcoming in alerting financial statement users to that area. This interpretation is consistent with Maksymov and Nelson’s [2014] recent conclusion that, when prospective jurors do not know audit quality \textit{ex ante}, subsequent evidence that is suggestive of higher audit quality reduces the likelihood that auditors are viewed as negligent relative to a default standard of care. Our findings also suggest that CAM disclosures appear to serve as a fair warning of the less reliable nature of the financial statement area(s) so identified. To the extent that the PCAOB does not wish users to infer such warnings from CAM disclosures, this interpretation suggests a potentially important unintended consequence of the PCAOB’s proposal that regulators should consider.

5. Discussion and Conclusions

Experiments are well-suited to address \textit{ex ante} policy questions, as the experimentalist can manipulate proposed alternatives on a trial basis and under \textit{ceteris paribus} conditions.

\(^5\) For the competence and disclosure sufficiency questions, we also observe a statistically significant interaction between the CAM match and disclosed procedures factors (\( p < 0.01 \) for competence and \( p = 0.04 \) for sufficiency), indicating that the tendency for participants to provide higher scores when the CAM area matches the area of the misstatement is more pronounced when the auditor also discloses CAM-related audit procedures. However, insofar as disclosed procedures do not significantly influence our primary dependent measures of perceived assurance, auditor responsibility, and liability, we hesitate to draw inferences from these interactions.
(Kachelmeier and King [2002]). Donelson, Kadous, and McInnis [2014] call for more research that applies this advantage to the particular case of how proposed changes in audit regulation affect auditor liability. We answer this call in an experiment that tests the effects of the PCAOB’s [2013] proposed standard to require disclosures of “critical audit matters” in the auditor’s report, with the additional option to disclose the specific audit procedures directed to the CAM.

While CAM disclosures would provide more information about the audit to financial statement users, it is unclear how that information would influence user assessments of the level of audit assurance provided and the auditor’s responsibility and liability for a subsequently revealed misstatement. On one hand, labeling a financial statement area as being “critical” to the audit connotes a sense of high importance to that area, potentially increasing the perceived level of assurance provided and fueling any counterfactual reasoning of what the auditor “should have known” in the event that a material misstatement goes undetected by the auditor. But on the other hand, the PCAOB’s definition of a CAM as involving “difficult, subjective, or complex judgments” could be taken to imply a partial qualification of the auditor’s ability to reach definitive conclusions, thereby lowering perceived assurance in the CAM area and lessening the auditor’s perceived responsibility and liability if a misstatement later arises in that area.

We test these two possibilities in an experiment with MBA student volunteers, and reach a consistent finding: CAM disclosures lower users’ perceived assurance in the CAM area, relative to perceived assurance in a comparable area not identified as a CAM. Similarly, CAM disclosures lower perceived auditor responsibility and liability for a misstatement if the financial statement area disclosed as a CAM matches the area of the misstatement, relative to responsibility and liability assessments when a CAM area differs from the area of the
misstatement. To the extent that our results generalize, a potential implication for practice is that the PCAOB’s proposed standard could prompt auditors to issue laborious reports that disclose many CAMs, “covering all bases” to avoid the criticism of insufficient warning in the event that a misstatement is later discovered in an area that is difficult to audit. The PCAOB’s [2013, p. A1-9] proposal is explicit in cautioning auditors against CAM wording “that could be viewed as disclaiming, qualifying, restricting or minimizing the auditor’s responsibility for the CAM.” Yet, our results suggest that the PCAOB’s own definition of a CAM and suggested disclosure wording could have such an unintended effect.

One might surmise that disclosure in the auditor’s report of the audit procedures directed to a CAM, as the PCAOB’s [2013] proposal allows but does not mandate, would mitigate any propensity of users to view CAM disclosures as conveying lower audit assurance or as qualifying the auditor’s responsibility. However, using the PCAOB’s suggested wording for disclosing CAM-related audit procedures, we find no evidence that disclosing audit procedures changes our primary conclusion that identifying a CAM in the auditor’s report lowers perceived assurance and perceived auditor responsibility/liability for a misstatement in the area identified as a CAM. The lack of any discernable effect of disclosed audit procedures does not appear to reflect inattentiveness on the part of our participants, as our primary tests include only those participants who correctly answer the manipulation check questions we ask at the end of the study, including a question to confirm awareness of the presence or absence of disclosed audit procedures. Rather, this finding appears consistent with the recent conclusions of Vera-Muñoz et al. [2014], who find in a different setting involving environmental sustainability reporting that users are unable to surmise the level of audit assurance from the disclosure of audit procedures.
While we believe that our study provides helpful insights on an important policy question, we acknowledge various limitations. First, the objective of our study is more to test a specific regulatory policy proposal than to test theory. That is, while we draw on culpable control theory (Alicke [2000], Alicke et al. [2008]) to guide our reasoning, our key manipulations essentially take the PCAOB’s [2013] proposal “as is,” including any mixed messages the PCAOB’s suggested wording might imply. Accordingly, our study is not designed to isolate the directional predictions of a theoretical model so much as it is designed to test a two-tailed empirical question from proposed policy materials, for which *ex ante* theoretical insights could be argued in either direction. Second, while we believe that our use of MBA students provides a reasonable compromise between basic business expertise and independence from the accounting and auditing professions, we acknowledge that other user populations, including attorneys and analysts, could have different perceptions leading to different conclusions.

Finally, our findings could be sensitive to other factors that our study does not manipulate. For example, Kadous [2000] finds that prospective jurors are more likely to conclude that an auditor meets a reasonable-care standard when the consequences of an audit failure are relatively mild, whereas more severe consequences increase the propensity to blame the auditor. Our experimental materials indicate that the Company “significantly misstated” a financial statement area (either the fair value of investments or the allowance for sales returns), but we do not specify or manipulate the consequences of the misstatement. As a second example, for the sake of simplicity, we restrict our materials to the case of only one area disclosed as a CAM, and therefore cannot speak directly to the possible moderating effects of multiple CAMs in the same report. Finally, although our participants could have inferred different audit behavior dependent on the nature of the CAM disclosures provided, we do not explicitly measure or
manipulate how the PCAOB’s [2013] CAM proposal might affect the nature of the audit itself. This design choice allows us to isolate user reactions to CAM disclosures in a *ceteris paribus* setting, while we acknowledge that the second-order effects of CAM disclosures on the extent of auditing in CAM and in other areas are also important and worthy of study.

While the PCAOB’s [2013] auditor reporting proposal could provide investors with more informative audit reports, our results suggest that it could also result in unintended consequences. Our study offers the constructive criticism that CAM disclosures, with or without the additional disclosure of audit procedures, appear to be interpreted by users as suggesting a lower level of audit assurance in the CAM area, which in turn lowers users’ perceptions of the auditor’s responsibility and liability for a material misstatement discovered later in the area identified as a CAM. To the extent that these findings run counter to the PCAOB’s [2013] expressed intent, some additional consideration could be appropriate. We encourage further research to corroborate, modify, and extend these conclusions towards goal of a more informative audit reporting model.
Appendix
Experimental Materials

What this study is about

In this study, you will provide some judgments regarding a company’s audit based on an audit report and some background material about the company. **There are no correct or incorrect answers.** Rather, we are genuinely asking for **your** judgments so that we can understand how people interpret audit reports.

The primary purpose of an audit report is for the auditor to express an opinion on the fair presentation of the audited company’s financial statements. An audit provides reasonable assurance but not absolute assurance that the financial statements are free from material misstatement.

[Page break]

Information about Roxden

Roxden is a medium-to-large sized company that sells various lines of apparel to retail consumers. The company trades on a major U.S. stock exchange, and is audited by a large U.S. public accounting firm. Roxden’s financial performance is about average for companies in its industry.

From your review of Roxden’s financial statements and related notes, the following items caught your attention (in no particular order). These are all items that an auditor would be sensitive to in performing the audit.

1. **Goodwill.** Under U.S. accounting principles, a company recognizes the asset “goodwill” when it purchases another company for more than the market value of that company’s tangible net assets. Then, in later years, companies must evaluate the amount recorded for goodwill to make sure it is not impaired in value, in which case it must be reduced. Goodwill from prior acquisitions of other businesses accounts for about 25 percent of Roxden’s long-term assets.

2. **New sales channel and allowance for sales returns.** Beginning this year, Roxden introduced an extensive online sales channel to allow its customers to purchase products directly from the company via the Internet, in addition to traditional purchases at retail stores. Online sales could experience significantly different sales returns than traditional sales.

3. **Investments in securities.** Roxden invests a large portion of its excess funds in complicated financial instruments known as “private-label mortgage backed securities” and collateralized loan obligations.

4. **Taxes.** Roxden has unusually low tax expense relative to its reported income, apparently because management undertakes extensive tax planning strategies to lower its tax burden.
Roxden’s audit report:

[The following standard audit report wording appeared in all conditions, and was the entirety of the audit report in the “current practice” control condition.]

Roxden, like the vast majority of all publicly traded companies, received a standard “clean” audit opinion on its most recent annual financial statements. Specifically, Roxden’s auditor used the following, typical language in its audit report:

We have audited the balance sheets of Roxden, Inc. as of December 31, 2013 and 2012, and the related statements of operations, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2013. These financial statements are the responsibility of Roxden Inc.’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Roxden, Inc. and subsidiaries at December 31, 2013 and 2012, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.
In addition to the above statements in the auditor’s report, the auditors included the following information:

**Critical Audit Matter:** We determined that our evaluation of the reported fair values of the Company’s investment securities was a critical audit matter in the audit of the Company’s financial statements as of and for the fiscal year ended December 31, 2013. Approximately 35 percent of the Company’s investment portfolio is comprised of private label mortgage-backed securities and collateralized loan obligations. These investments involved difficult and complex auditor judgments because these securities (1) trade less frequently, and (2) were valued using in-house valuation models based on unobservable inputs. Accordingly, these investments posed difficulty to us in obtaining sufficient appropriate evidence to support management’s fair value estimates.

**Critical Audit Matter:** We determined that our evaluation of the Company’s allowance for sales returns was a critical audit matter in the audit of the Company’s financial statement as of and for the fiscal year ended December 31, 2013. The Company developed a new online sales channel. This new sales channel could generate significantly different sales returns relative to sales returns from the Company’s more established retail stores. The Company developed new models with different assumptions in its estimate of the allowance for sales returns, a key element in recording revenue. The lack of historical experience with the new assumptions resulted in a high degree of measurement uncertainty in estimating the allowance for sales returns. Because of these changes, our audit of the Company’s allowance for sales returns involved our difficult and subjective judgments in evaluating whether the Company had a sufficient basis to make a reasonable estimate of sales returns. Accordingly, these changes posed difficulty to us in obtaining sufficient appropriate evidence to support management’s adjustments to the allowance for sales returns.
[In the conditions with additional disclosure of CAM-related audit procedures, one of the following two paragraphs followed, corresponding to the area of the CAM disclosure in the preceding paragraph.]

**Related Procedures:** To address this uncertainty, we consulted with our national office on (1) the design and performance of audit procedures to test the data underlying management’s assumptions used to value estimates of the Company’s investment securities, and (2) our evaluation of the results of those procedures, including our assessment of the reasonableness of management’s judgments regarding the model to estimate the fair value. These procedures involved an extensive amount of audit work, including significant involvement of senior members of the engagement team and consultation with a third-party valuation specialist.

**Related Procedures:** To address this uncertainty, we consulted with our national office on (1) the design and performance of audit procedures to test the data underlying management’s assumptions used to estimate future sales returns, and (2) our evaluation of the results of those procedures, including our assessment of the reasonableness of management’s judgments regarding the estimate of future sales returns. These procedures involved an extensive amount of audit work, including significant involvement of senior members of the engagement team and consultation with management.

[In the “no CAM present” control condition, the CAM disclosure was replaced with the following wording.]

In addition to the above statements in the auditor’s report, the auditors included the following information:

*The standards of the PCAOB require that we communicate in our report critical audit matters relating to the audit of the current period’s financial statements or state that we determined that there are no critical audit matters. Critical audit matters are those matters addressed during the audit that (1) involved our most difficult, subjective, or complex judgments; (2) posed the most difficulty to us in obtaining sufficient appropriate evidence; or (3) posed the most difficulty to us in forming our opinion on the financial statements. We determined that there are no critical audit matters.*
Material misstatement discovered later

Assume that two years after the financial statements and audit report were issued, investigators discover that Roxden management had significantly misstated the value of the company’s private label mortgage-backed securities [OR significantly misstated the allowance for sales returns pertaining to Roxden’s new online sales channel]. Specifically, management misstated its estimated investment securities values [sales returns] in a way that improved its reported net income by a material amount.

The questions that follow elicit your perceptions of whether the auditor exercised due professional care in this fact situation, where due professional care is the level of care that a prudent and competent auditor would have exercised in a similar situation.

In light of this new development, please answer the following questions. **Do not go back and change earlier responses.**

[The materials followed with Likert-scale questions eliciting the perceptions of the auditor’s responsibility and liability for the misstatement in the value of the Company’s private-label mortgage-backed securities or for the allowance for sales returns pertaining to Roxden’s new online sales channel, followed by several post-experimental and demographic questions (full materials available upon request).]
References


TABLE 1
Demographic Statistics

Number of participants
- MBA student participants who completed the study 179
- Less: Participants who incorrectly answered one or both manipulation check questions (34)
- Usable participants for primary analyses 145

Assignment of usable participants to conditions:
- CAM matches misstatement / procedures disclosed 22
- CAM does not match misstatement / procedures disclosed 19
- CAM matches misstatement / procedures not disclosed 24
- CAM does not match misstatement / procedures not disclosed 27
- Control condition with no CAM present 24
- Control condition under current practice 29
- Total usable participants 145

Demographic statistics for usable participants:

Gender
- Male 105 (72%)
- Female 40 (28%)
- Total usable participants 145

Years of work experience
- Mean 5.25
- Standard deviation 1.92

Familiarity with financial statement audits (11-point Likert scale)
- Mean 4.63
- Standard deviation 2.34

Claimed areas of expertise
- Finance 70 (48%)
- Accounting 34 (23%)
- Auditing 7 (5%)
- Management 54 (79%)
- Marketing 50 (34%)
- Other 43 (30%)

\[ ^{a} \text{Claimed areas of expertise do not sum to the total number of usable participants because several participants claimed more than one area of expertise.} \]
### TABLE 2  
Perceived Assurance of Financial Statement Accounts

**Panel A:** Descriptive Statistics: Means and (Standard Deviations)

<table>
<thead>
<tr>
<th>Between-Participants Factor</th>
<th>Within-Participants Factor</th>
<th>Assurance Question Matches the Area of the CAM Disclosure</th>
<th>Assurance Question Does Not Match the Area of the CAM Disclosure</th>
<th>Averages Across Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM-Related Procedures Disclosed</td>
<td>5.18</td>
<td>6.45</td>
<td>5.82</td>
<td>n = 41&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>CAM-Related Procedures Not Disclosed</td>
<td>4.57</td>
<td>6.25</td>
<td>5.41</td>
<td>n = 51&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Averages Across Conditions</td>
<td>4.84</td>
<td>6.34</td>
<td>6.08</td>
<td>n = 92</td>
</tr>
</tbody>
</table>

Additional Control Conditions:

- **No CAM Present**
  - CAM Matching: 6.08 (1.84), n = 48

- **Current Practice**
  - CAM Matching: 5.84 (2.08), n = 58

<sup>a</sup> Assurance assessments occur before the misstatement is revealed, and hence collapse across cells in which the subsequent misstatement does or does not match with CAM disclosure.

**Panel B: ANOVA Results (Excluding Additional Control Conditions)**

<table>
<thead>
<tr>
<th>Within-Participants Tests:</th>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>Two-tailed p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM Matching</td>
<td>1</td>
<td>99.20</td>
<td>25.54</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>CAM Matching × Procedures</td>
<td>1</td>
<td>1.99</td>
<td>0.51</td>
<td>0.48</td>
</tr>
<tr>
<td>Covariate for Fair Value CAM</td>
<td>1</td>
<td>2.25</td>
<td>0.58</td>
<td>0.45</td>
</tr>
<tr>
<td>Within-Participants Residual</td>
<td>90</td>
<td>3.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Between-Participants Test:</th>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>Two-tailed p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures</td>
<td>1</td>
<td>7.93</td>
<td>1.51</td>
<td>0.22</td>
</tr>
<tr>
<td>Between-Participants Residual</td>
<td>89</td>
<td>5.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued next page)
### Panel C: Comparisons to Additional Control Conditions

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>Control Group</th>
<th>No CAM Present</th>
<th>Current Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>t-statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>CAM Matches Assurance</td>
<td></td>
<td>3.54</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>CAM Does Not Match Assurance</td>
<td></td>
<td>0.75</td>
<td>0.45</td>
</tr>
<tr>
<td>No CAM Present</td>
<td></td>
<td>0.62</td>
<td>0.53</td>
</tr>
</tbody>
</table>
### TABLE 3  
**Perceived Auditor Responsibility for Misstatement**

**Panel A:** Descriptive Statistics: Means and (Standard Deviations)

<table>
<thead>
<tr>
<th>Misstatement Matches the Area of the CAM Disclosure</th>
<th>Misstatement Does Not Match the Area of the CAM Disclosure</th>
<th>Averages Across Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM-Related Procedures Disclosed</td>
<td>CAM-Related Procedures Not Disclosed</td>
<td></td>
</tr>
<tr>
<td>5.80 (2.78)</td>
<td>5.21 (2.50)</td>
<td>5.49 (2.63)</td>
</tr>
<tr>
<td>n = 22</td>
<td>n = 24</td>
<td>n = 46</td>
</tr>
<tr>
<td>7.11 (2.21)</td>
<td>6.67 (2.30)</td>
<td>6.85 (2.25)</td>
</tr>
<tr>
<td>n = 19</td>
<td>n = 27</td>
<td>n = 46</td>
</tr>
</tbody>
</table>

**Averages Across Conditions**

| CAM-Related Procedures Disclosed                   | CAM-Related Procedures Not Disclosed                         |
| 5.80 (2.78)                                        | 5.21 (2.50)                                                 | 5.49 (2.63)                 |
| n = 22                                             | n = 24                                                      | n = 46                      |

**Additional Control Conditions:**

- **No CAM Present**
  - 5.83 (2.75)
  - n = 24

- **Current Practice**
  - 6.31 (2.29)
  - n = 29

**Panel B:** ANOVA Results (Excluding Additional Control Conditions)

<table>
<thead>
<tr>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>Two-tailed p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM Matching Procedures</td>
<td>1</td>
<td>43.04</td>
<td>7.06</td>
</tr>
<tr>
<td>CAM Matching × Procedures</td>
<td>1</td>
<td>6.28</td>
<td>1.03</td>
</tr>
<tr>
<td>Covariate for Fair Value CAM</td>
<td>1</td>
<td>0.12</td>
<td>0.02</td>
</tr>
<tr>
<td>Residual</td>
<td>87</td>
<td>6.10</td>
<td></td>
</tr>
</tbody>
</table>

**Panel C:** Comparisons to Additional Control Conditions

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>Control Group</th>
<th>No CAM Present</th>
<th>Current Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-statistic</td>
<td>Two-Tailed p-value</td>
<td>t-statistic</td>
</tr>
<tr>
<td>CAM Matches Misstatement</td>
<td>0.51</td>
<td>0.62</td>
<td>1.43</td>
</tr>
<tr>
<td>CAM Does Not Match Misstatement</td>
<td>1.56</td>
<td>0.13</td>
<td>1.00</td>
</tr>
<tr>
<td>No CAM Present</td>
<td>1.38</td>
<td>0.50</td>
<td>0.68</td>
</tr>
</tbody>
</table>
### TABLE 4
Perceived Auditor Liability for Misstatement

**Panel A:** Descriptive Statistics: Means and (Standard Deviations)

<table>
<thead>
<tr>
<th>Misstatement</th>
<th>Misstatement</th>
<th>Averages</th>
<th>Across Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matches the Area of the CAM Disclosure</td>
<td>Does Not Match the Area of the CAM Disclosure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAM-Related Procedures Disclosed</td>
<td>4.43</td>
<td>6.05</td>
<td>5.18</td>
</tr>
<tr>
<td>n = 22</td>
<td>(3.11)</td>
<td>(2.97)</td>
<td>(3.11)</td>
</tr>
<tr>
<td>CAM-Related Procedures Not Disclosed</td>
<td>4.58</td>
<td>5.11</td>
<td>4.86</td>
</tr>
<tr>
<td>n = 24</td>
<td>(2.75)</td>
<td>(2.69)</td>
<td>(2.71)</td>
</tr>
<tr>
<td>Averages Across Conditions</td>
<td>4.51</td>
<td>5.50</td>
<td></td>
</tr>
<tr>
<td>n = 46</td>
<td>(2.90)</td>
<td>(2.82)</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Control Conditions:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No CAM Present</td>
<td>5.08</td>
</tr>
<tr>
<td>n = 24</td>
<td>(2.89)</td>
</tr>
<tr>
<td>Current Practice</td>
<td>5.07</td>
</tr>
<tr>
<td>n = 29</td>
<td>(3.10)</td>
</tr>
</tbody>
</table>

**Panel B:** ANOVA Results (Excluding Additional Control Conditions)

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>Two-tailed p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between-Participants Tests:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAM Matching</td>
<td>1</td>
<td>26.11</td>
<td>3.14</td>
<td>0.08</td>
</tr>
<tr>
<td>Procedures</td>
<td>1</td>
<td>3.51</td>
<td>0.42</td>
<td>0.52</td>
</tr>
<tr>
<td>CAM Matching × Procedures</td>
<td>1</td>
<td>6.76</td>
<td>0.81</td>
<td>0.37</td>
</tr>
<tr>
<td>Covariate for Fair Value CAM</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.99</td>
</tr>
<tr>
<td>Residual</td>
<td>87</td>
<td>8.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Panel C:** Comparisons to Additional Control Conditions

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th></th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No CAM Present</td>
<td>Current Practice</td>
</tr>
<tr>
<td></td>
<td>Two-Tailed</td>
<td>Two-Tailed</td>
</tr>
<tr>
<td></td>
<td>t-statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>CAM Matches Misstatement</td>
<td>0.79</td>
<td>0.44</td>
</tr>
<tr>
<td>CAM Does Not Match Misstatement</td>
<td>0.58</td>
<td>0.57</td>
</tr>
<tr>
<td>No CAM Present</td>
<td>0.02</td>
<td>0.99</td>
</tr>
</tbody>
</table>