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## CRITICAL AUDIT MATTERS REQUIREMENTS AND AUDITOR REPORTING BEHAVIOR: EARLY U.S. EVIDENCE

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CRITICAL AUDIT MATTERS REQUIREMENTS  
AND AUDITOR REPORTING BEHAVIOR:  
EARLY U.S. EVIDENCE

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DISSERTATION

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A dissertation submitted in partial fulfillment of the  
requirements for the degree of Doctor of Philosophy in the  
College of Business and Economics  
at the University of Kentucky

By

Valbona Sulcaj

Lexington, Kentucky

Co-Directors: Dr. Monika Causholli, Professor of Accounting

and Dr. David A. Ziebart, Professor of Accountancy

Lexington, Kentucky

2021

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## ABSTRACT OF DISSERTATION

### CRITICAL AUDIT MATTERS REQUIREMENTS AND AUDITOR REPORTING BEHAVIOR: EARLY U.S. EVIDENCE

In this study, I examine two research questions related to the reporting requirements of critical audit matters (CAMs) introduced in the Audit Standard (AS) 3101. First, I examine whether auditor's perceived litigation risk and client's financial reporting quality are associated with the number and textual attributes of CAMs. Second, I examine whether the number and textual attributes of CAMs are associated with audit effort and costs.

Consistent with the litigation hypothesis (Skinner, 1994), I find a positive association between litigation risk and the number of CAMs in the audit report, suggesting that auditors try to preempt negative consequences from shareholder lawsuits by reporting more CAMs when litigation risk is higher. The results also show the number of reported CAMs increases when financial reporting quality decreases, suggesting that audit reports reflect the inherent quality of financial statements.

However, in presence of high litigation risk, the CAM language becomes more boilerplate and less readable as the quality of financial reporting decreases. A detailed examination shows the lower readability is found in the auditor response section of CAM, rather than in the CAM description, thus rejecting the information hypothesis but not the obfuscation hypothesis (Bloomfield, 2008). These results suggest that auditors touch upon issues they are required to disclose without necessarily providing clarity to financial statement users. They are consistent with the notion that auditors may be using the number of CAMs as a protection against litigation and the CAM textual features to obfuscate the lower quality of client's financial reporting.

Further, I also show that audit fees and audit report delay increase as the number of CAMs in the audit report increases, suggesting a positive association between audit effort and costs and the number of reported CAMs. However, there is no conclusive evidence that audit effort and costs are associated with CAM textual attributes. Lastly, results from additional analysis suggest that CAM language is largely determined at the audit firm level casting doubt as to whether the standard has achieved the stated objective of CAMs being specific to each audit engagement.

My research questions are motivated by auditor concerns prior to standard adoption, that CAM requirements would increase the exposure to litigation risk and the audit costs and effort. This is the first study that sheds light on auditor reporting of CAMs in response to litigation risk. This is also the first study that provides evidence on how CAM disclosures map to financial reporting quality depending on litigation risk. This study also contributes to the audit effort literature by showing that CAM disclosure quantity is associated with greater effort. These results can inform standard-setters when evaluating the effectiveness of the AS 3101 implementation.

**KEYWORDS:** Critical Audit Matters, CAM Textual Attributes, Litigation Risk, Financial Reporting Quality, Audit Fees, Audit Effort.

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Valbona Sulcaj

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June 11, 2021

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Date

To my son, Kevin.

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## CHAPTER 1 INTRODUCTION

The external auditor is an important mediator between investors and public companies with the critical role of providing reasonable assurance that the financial statements are free of material misstatements. However, the traditional pass/fail audit reporting model has led to a highly standardized audit report that provides little information on the quality of a company's financial statements as well as the audit process, creating an expectation gap between the auditor and the users of financial statements (Church et al., 2008). Aiming to address this gap, in June 2017, the Public Company Accounting Oversight Board (PCAOB) enacted AS 3101 which requires auditors to communicate in the audit report the critical audit matters (CAMs) that surfaced during the audit engagement.

A CAM is defined as any matter communicated or required to be communicated to the audit committee, that arose from the audit of financial statements in areas involving material accounts or disclosures, and that involved especially challenging, subjective, or complex auditor judgment (PCAOB, 2017). A CAM disclosure has two components: the description of the matter including principal considerations that led the auditor to determine that matter as critical (Description, hereafter), and the auditor's response as to how the CAM was addressed during the audit engagement (Response, hereafter). Although CAM requirements are principle based and allow for auditor discretion, the PCAOB expects that the majority of audit reports will include at least one CAM (PCAOB, 2017)<sup>1</sup> and that CAM

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<sup>1</sup> AS 3101.12 states that it is expected that, in most audits, the auditor would determine that at least one matter involved especially challenging, subjective, or complex auditor judgment.

disclosures will be tailored to the specific audit engagement and explain the matter using clear and concise language that can be easily understood by the public (PCAOB, 2019).<sup>2</sup>

During the entire PCAOB’s public outreach period prior to the adoption of AS 3101, audit firms strongly voiced two major concerns regarding the new requirements: a significant increase in litigation risk and associated legal liabilities, and an increase in audit costs due to increased effort. For example, the Center for Audit Quality (CAQ), cautioned on the high risk that whatever is communicated in the audit report could be challenged after the fact in a shareholder lawsuit, and that investors might allege that auditors should have said more when disclosing CAMs, claiming that some detail known to the auditor should have been disclosed in the audit report.<sup>3</sup> The KPMG – one of the “Big Four” audit firms – specifically mentioned that the requirement to determine and report on CAMs will result in additional audit effort and increased audit cost.<sup>4</sup>

In this study, I examine auditor reporting behavior and audit pricing given the requirements placed by the new standard, AS 3101. Specifically, I study whether the quantity and textual attributes of CAM disclosures vary with auditor’s litigation risk, and whether they map into client’s financial reporting quality depending on the presence (or absence) of litigation risk. I also examine whether and to what extent audit effort and costs vary with the number of CAM disclosures and CAM textual attributes.

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<sup>2</sup> Tailoring the disclosure to the specific audit engagement implies avoiding standardized or boilerplate language while explaining the matter clearly implies presenting it using highly readable text. As noted in the focus group study by Gray et al. (2011), financial statements users consider the auditor’s report to be “boilerplate”.

<sup>3</sup> The CAQ is an autonomous, nonprofit public policy advocacy organization whose members are public audit firms.

<sup>4</sup> The comment letters received in response to the proposed standard for the expanded auditor’s report are available at: <https://pcaobus.org/Rulemaking/Pages/Docket034Comments.aspx> and <https://www.sec.gov/comments/pcaob-2017-01/pcaob201701.htm>.

Although the Private Securities Litigation Reform Act (PSLRA) of 1995 limited shareholders ability to sue entities other than the one making the statements, auditors are now exposed to litigation because of the responsibility on what they disclose in the new, expanded, audit reports (Alderman, 2020). Experimental studies using jurors as participants, have provided mixed findings on whether CAM disclosures impact jurors' assessment of auditor liability (e.g., Brasel et al., 2016; Backof et al., 2018). However, recent evidence in Kachelmeier et al. (2020) confirms that disclosing a CAM has a “disclaimer” effect, thus, lowering auditor’s liability, when the matter is complex and has high measurement uncertainty. Nonetheless, this line of research is concerned with litigation that might arise subsequent to CAM disclosures leaving open the empirical question as to how perceived litigation affects auditor CAM disclosures.

The professional guidance on auditors’ risks considerations, describes litigation as an important component of audit business risk that should be pondered and managed during audit planning, processes, fees, and reporting (AICPA, 2005).<sup>5</sup> Extensive accounting research has provided evidence consistent with litigation risk being a factor in auditors’ decisions with respect to audit evidence collection (Houston et al., 1999), audit pricing (e.g., Choi et al., 2009; Badertscher et al., 2014), industry specialization choice (Hogan and Jeter, 1999), resignations or new client acceptances (Krishnan and Krishnan, 1997; Johnstone, 2000; Johnstone and Bedard, 2003). Auditors also engage in lobbying to mitigate litigation risk and legal liabilities (Geiger and Raghunandan, 2001).

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<sup>5</sup> SAS no. 107, Section 312, states that auditors are exposed to loss of or injury to their professional practice from litigation regarding financial statements audited and reported on. Available at: <https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-00312.pdf>

With respect to audit reporting, the literature also confirms that auditors consider litigation risk in their reporting decisions. For example, studies show that ex-ante litigation risk increases the likelihood that the auditor issues a going concern report (e.g., Krishnan and Krishnan, 1996; Kaplan and Williams, 2013; Chy et al., 2021). Consistent with the litigation hypothesis (Skinner, 1994), these findings suggest that when litigation risk is high, the auditor will issue a report that may serve as a forewarning to financial statement users in order to preempt negative consequences from eventual shareholder lawsuits. Therefore, I hypothesize that the incentive to mitigate litigation and legal liabilities will motivate the auditor to include more CAMs in the audit report as litigation risk increases.

With respect to the language in CAM disclosures, there are specific requirements and expectations regarding text readability and boilerplate language. First, the PCAOB guides that the disclosure should be clear and easy to understand for investors and other financial statements users (PCAOB, 2019). This implies that the text of disclosure as part of a public report should present high readability. This guidance is further reinforced by the SEC's Plain English Disclosure, Rule 421(d) (SEC, 1998a) which requires the use of plain English in filings with the SEC, with the purpose of addressing concerns relating to unreadable public company filings. Disclosure readability is defined as the effective communication of relevant information (Loughran and McDonald, 2014). However, litigation risk might make the task of procuring highly readable disclosures challenging. Bloomfield (2008) argues that litigation is one of the reasons for the presence of unreadable company filings whereby preparers issue less readable disclosures in order to shield themselves from litigation. Second, the PCAOB requires that CAM disclosures be tailored to reflect specific circumstances of the critical matter as it arose during the specific audit



engagement (PCAOB, 2017) which seeks to minimize standardized (boilerplate) language. The requirement is a significant departure from the traditional and highly standardized audit reporting model. Therefore, if the language used to discuss the issues is not specific, then CAM disclosures will not fully achieve their goal (Audit Analytics, 2021). However, it is unclear whether and to what extent auditors will be able to provide concise and tailored disclosures in the presence of litigation risk, especially if attorneys get involved in the preparation of disclosures. Consistent with the theory of boilerplate economics (Kahan and Klausner, 1997), auditors may use lengthy and boilerplate language as protection from future litigation. Overall, it is unclear whether litigation risk will affect CAM disclosure readability, boilerplate, and text length.

Next, I examine how the number of CAM disclosures in the audit report map to the client's financial reporting quality. Although there are four types of audit opinions, about 99 percent of issued reports represent unqualified opinions (Brazel et al., 2011).<sup>6</sup> This means that, traditionally, audit reports have simply reflected a pass or fail outcome,<sup>7</sup> This binary model has made it difficult for investors to infer anything on the relative financial reporting quality of public companies from audit reports (Christensen et al., 2019). However, often auditors have followed professional standards that enable them to include, at their discretion, additional paragraphs for emphasis of a matter to the traditional unqualified audit report. Czerney et al. (2014) finds that financial statements where the audit report includes emphasis paragraphs are significantly more likely to be subsequently restated than financial statements without these paragraphs. Their study suggests that

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<sup>6</sup> The unqualified opinion means a "clean" opinion where the auditor provides assurance that client's financial statements have been prepared in accordance with Generally Accepted Accounting Principles. The other types of auditor opinions are: qualified, disclaimer, and adverse.

<sup>7</sup> Note that the terms audit report and audit opinion are used interchangeably.

auditors use their discretion to expand their reports in order to provide information reflecting the inherent quality of financial statements (and in compliance with professional standards). Further, it is highly likely that auditors will encounter relatively more critical issues when clients have more accounting problems. Hence, I expect that auditors will issue relatively more CAMs when clients have lower quality of financial reporting.

Regarding the language attributes in CAM disclosures, it is *ex ante* unclear as to how the financial reporting quality relates to textual attributes of readability, boilerplate, and text length. On the one hand, regulators expect that the text in public company filings and disclosures be readable and understandable (SEC, 1998a), and the audit reports depart from the use of standardized language (PCAOB, 2017). On the other hand, literature has evidenced a number of problems affecting disclosure textual attributes. For example, Lo et al. (2017) suggests that companies use lower readability to obfuscate earnings management (i.e., obfuscation hypothesis). Li (2008) suggests that companies issue less readable reports in an attempt to hide bad performance. However, Bloomfield (2008) advances the alternative explanation that the lower readability is because companies with poor performance and earnings quality face problems which may be inherently more difficult to describe (i.e., the information theory). In addition to these two theoretical explanations, another auditor incentive at play relates to CAM disclosures becoming a source of disagreement or tension with the client since these disclosures relate to matters that are both critical and material. Therefore, even though auditors are under greater scrutiny as the result of the new reporting requirements (Minutti-Meza, 2020), auditors may be compelled to prepare disclosures in a way that does not place them and their client in a negative light. While the number of CAMs is easily verifiable and connected to potential audit failures in

the future, CAM textual features grant auditors higher degrees of freedom in crafting and reporting a CAM while protecting their clients and avoid losses in the audit market. Given the two countervailing forces and incentives, it is unclear to what extent CAM textual features will reflect the client's financial reporting quality.

Next, I consider the relation between CAM disclosures quantity and textual quality and financial reporting quality in presence of litigation risk and examine whether auditors report over-conservatively in that case. Auditors are often incentivized to conduct “defensive” audits (Brown et al., 2020). Literature offers several reasons to explain auditor incentives, such as: 1) audit environment – where auditors can be involved in shareholder lawsuits because of their “deep pockets” (Dye, 1993); 2) the risk asymmetry whereby auditors are sued for issuing reports that are insufficiently conservative but not for being too conservative (Lennox, 1999); 3) jurors' culpability assessments – where even for high quality work auditors can be perceived as negligent (Backof, 2015); and 4) auditors also tend to overestimate the negative consequences given litigation (Gimbar and Mercer, 2021). The implication is that auditors may engage in overly cautious reporting when facing high litigation risk since the audit report is obviously the strongest defense tool in a shareholder lawsuit. Therefore, I expect litigation risk to accentuate any relationship between financial reporting quality and CAM disclosures, whereby in the presence of litigation risk, financial reporting quality is strongly (incrementally) associated with CAM disclosures quantity and textual quality.

In my final set of analyses, I turn the focus to whether audit effort and costs vary with the number and textual features of CAM disclosures communicated in the audit reports. In addition to litigation risk, audit costs and effort were the other major area of

concern for auditors during the proposal phase of the new standard (Hanson, 2016). Prior studies that examine similar changes in standard requirements in other jurisdictions report mixed findings of an effect on audit fees (e.g., Liao et al., 2019; Reid et al., 2019; Li et al., 2018). Similarly, in the US setting, studies do not find results of a change in audit fees from the change in reporting regulation (e.g., Bochkay et al., 2020; Burke et al., 2020). However, cross-sectional analysis suggests that companies pay relatively higher fees when the audit report includes a higher number of material risks (Gutierrez et al., 2018) or CAM disclosures (Burke et al. 2020). Further, anecdotal evidence from auditors' training sessions during the "dry run" period suggests that auditors will need additional time and effort to identify, draft, and disclose relatively more CAMs in the audit report (CAQ, 2018b). Hence, I predict that audit firms' effort and costs are increasing in the number of CAM disclosures.

From a perspective of textual attributes of CAM disclosures, tailoring the disclosure to reflect specific circumstances of the matter encountered in the audit engagement while ensuring the disclosure is clear and understandable to financial statement users might also require additional hours in preparing the audit report. However, the evidence from similar research in other jurisdictions is inconclusive. While Chen et al. (2020) finds that audit fees for Hong Kong publicly listed companies are increasing in the length and complexity of auditor disclosures, Liao et al. (2019) examine the same setting and do not find any evidence that audit fees vary with the length of disclosures. However, even if the text length requires additional effort, the use of standardized language may reduce the effort needed to prepare the disclosure, especially if dry runs were used by audit firms to develop CAM templates. For example, McMullin (2016) argues that firms may reduce their effort by

“borrowing language” of disclosures from other peers. Based on these arguments, it is not clear how audit costs and effort vary with CAM textual attributes of readability, boilerplate, and length.

I obtain CAMs and auditor data from Audit Analytics, client accounting data from Compustat databases, and accounting complexity data developed in Hoitash and Hoitash (2018).<sup>8</sup> My sample period starts on June 30, 2019 when CAM requirements became effective and is limited to the auditor signature date February 29, 2020 in order to rule out possible effects on auditor reporting behavior from the COVID-19 pandemic.<sup>9</sup> I employ negative binomial regression to estimate the number of CAMs in the audit report. My CAM readability measure is based on the Bog index (Bonsall IV et al., 2017). I also measure readability of each of the CAM components: Description and Response. In alternative analyses, I also use a reading grade measure similar to the Fog index for comparability with prior literature (e.g., Lo et al., 2017). To measure disclosure text length, I use the number of words in the CAM disclosure and in each of its components. These measures are determined using the StyleWriter software (See Appendix A). Lastly, following prior studies (McMullin, 2016; Cazier et al. 2020; Campbell et al., 2020), I measure CAM boilerplate language using *WCopyFind* – a software for text re-use detection (see Appendix B). I estimate the disclosure textual attributes employing OLS regression method. The proxy for litigation risk follows the notion that auditor litigation risk arises solely from the

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<sup>8</sup> I thank the authors for making the data available at: <http://www.xbrlresearch.com/accounting-reporting-complexity>

<sup>9</sup> An example that supports this design choice is the recent blog from Audit Analytics (2021) where it is noted that the threshold for an intangible asset audit matter to be considered critical may have been lowered by pandemic-related conditions, while audit procedures were generally unaffected. The article is available here: [https://blog.auditanalytics.com/insights-from-covid-19-references-in-cams/?utm\\_source=campaign&utm\\_medium=email&utm\\_campaign=2021.04.02\\_BlogAlert\\_a](https://blog.auditanalytics.com/insights-from-covid-19-references-in-cams/?utm_source=campaign&utm_medium=email&utm_campaign=2021.04.02_BlogAlert_a)

association with the client (Bell et al., 2001). Therefore, I create an indicator for whether the client operates in a highly litigious industry (e.g., Francis et al., 1994; Matsumoto, 2002; Brown and Tucker, 2011; Donelson et al., 2012;). In additional analyses, I also use audit firm specific, and client specific measures of litigation risk based on their litigation histories. The proxy for financial reporting quality is the absolute value of discretionary accruals (Kothari et al., 2005). For the final set of my hypotheses, I employ OLS regression, and audit effort and costs are proxied by audit fees and audit report delay.

Consistent with my prediction, I find a positive and significant association between litigation risk and the number of reported CAMs, suggesting that auditors will attempt to mitigate legal liability by communicating more CAMs in the report. I also find a negative and significant association between litigation risk and boilerplate language suggesting that auditors tend to be more specific when disclosing CAMs in presence of litigation risk. However, there is no evidence of an association between litigation risk and CAM readability or CAM text length. Next and consistent with the predictions, I find a negative association between financial reporting quality and the number of reported CAMs in the audit report. However, there is no evidence of variation in CAM readability, boilerplate, or text length that would reflect the quality of financial reporting. Further, there is no evidence that in presence of litigation risk, the number of CAMs varies with financial reporting quality and, thus, the hypothesis of auditors reporting over-conservatively is not supported. However, the results from tests on CAM textual attributes suggests that in presence of litigation risk, CAM disclosures tend to be less readable and more boilerplate when clients have low financial reporting quality. A detailed examination of the readability in CAM components, shows that the lower readability is found in the Response component rather

than Description, rejecting the information hypothesis and consistent with the obfuscation hypothesis (Bloomfield, 2008).

Altogether, the above results suggest complementary effects of litigation risk, financial reporting quality, and their interaction on the quantity and textual attributes of reported CAMs. Auditors use the higher number of CAMs to mitigate litigation risk and liabilities, and CAM textual features such as low readability and high boilerplate language to protect their client when the financial reporting quality is lower. These results are consistent with the notion that auditors will disclose issues they are legally obligated to touch upon, without necessarily making them more readable or understandable to financial statements users.<sup>10</sup>

With regards to audit costs and effort, my results show that the number of CAMs in the audit report is positively associated with higher audit fees and longer audit report lag. However, the analyses using CAM textual measures do not provide consistent results across tests. Therefore, I refrain from making any inferences on the variation of audit costs and effort with CAM textual attributes.

I perform a series of additional analyses to test the robustness of my inferences. The results across tests support the conclusions from the main tests. In my last analysis, I explore the extent of variation in CAM disclosure boilerplate depending on several client characteristics, shared audit firm, shared audit office, and shared audit partner. The results show that audit firm has the greatest contribution in explaining CAM boilerplate language, suggesting that, on average, CAMs are determined at the audit firm rather than audit partner

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<sup>10</sup> The notion was coined by Warren Buffet in the Preface of the SEC's "A Plain English Handbook", available at: <https://www.sec.gov/pdf/handbook.pdf>

or client firm level.

This study makes several contributions to the literature and suggests future potential research. First, this is the first study to examine the reporting of CAMs in response to litigation exposure. I extend prior literature that examines auditor reporting behavior in relation to litigation risk (e.g., Krishnan and Krishnan, 1996; Kaplan and Williams, 2013) by showing that auditors will communicate more CAMs to financial statements users when they perceive higher litigation risk. Future research can examine the subsequent role of CAMs in mitigating auditor litigation, or legal liabilities in litigation cases. Further, since CAMs provide greater degrees of freedom relative to going concern opinions, it would be interesting to examine whether there are interactive effects and cases where CAMs might replace going concern opinions.

Second, this study is the first to examine how CAMs communicated in the audit report relate to client's financial reporting quality and provides evidence consistent with audit reports reflecting the quality of financial statements. Due to the lack of variation in the previous audit reporting model, evidence on the association between audit report and financial reporting quality was mostly limited to going concern opinions (e.g., Bartov et al. 2000) and emphasis paragraphs (e.g., Czerney et al. 2014). Because of the short sample period due to contextual circumstances, there is a risk that my small sample size may limit the power of some of the tests employed. Hence, future research can re-examine the variation in CAM textual attributes with respect to financial reporting quality using larger samples over longer periods. Another limitation of this study stems from the potential endogeneity caused by factors that may simultaneously affect litigation risk and CAM disclosures. Therefore, throughout this study I refrain from making causality claims based



on my test results.

Lastly, this study extends prior audit fees literature by examining the association between audit fees and report delay and the number of CAMs. While a large part of prior literature from many jurisdictions does not show evidence of an increase in audit fees as the result of changes in audit reporting (e.g., Reid et al., 2019; Gutierrez et al., 2018; Lennox et al., 2019; Bochkay et al., 2020; Burke et al., 2020), only a few studies report increased audit fees using cross-sectional analyses of material risk or critical matters disclosures (Gutierrez et al., 2018; Burke et al., 2020). Consistent with these studies, I provide evidence suggesting that increased effort and costs are required when preparing audit reports that include greater number of CAMs. Future research in later periods can examine whether the relative increase in audit costs is temporary or persistent.

The results reported in this study suggesting a negative association between financial reporting quality and number of reported CAMs can be of interest to investors when evaluating the CAMs disclosed in the audit report. Further, the results suggesting a positive association between litigation risk and number of reported CAMs confirm that auditors report consistent with their concerns voiced during the PCAOB public outreach period prior to standard adoption and can be of interest to standard setters when evaluating potential unintended consequences of new reporting requirements. Lastly, the results suggesting a lower readability in CAM's auditor Response component and higher CAM language boilerplate when clients present lower financial reporting quality in presence of litigation risk, can also be of interest to all stakeholders.

The remainder of this study is organized as follows. In Chapter 2, I provide information on the institutional background and develop the hypotheses. In Chapter 3, I

discuss the sample and the research design. In Chapter 4, I report the results from main and additional tests. In chapter 5, I draw conclusions about the results of my study and discuss the implications of the findings for accounting research and practice.

## CHAPTER 2

### INSTITUTIONAL BACKGROUND AND HYPOTHESES DEVELOPMENT

#### **Background Information**

In June 2017, the PCAOB adopted the new auditing standard – AS 3101: *The Auditor's Report on an Audit of Financial Statements When the Auditor Expresses an Unqualified Opinion* – with the objective of making the audit report more relevant to investors by requiring auditors to provide more information about the specific audit engagement. The standard introduced the most significant change to the audit report in the last 70 years – a considerable expansion of the binary model. Prior research on users' assessment of the audit report evidenced the existence of an expectation gap between financial statement users and auditors (Church et al., 2008; Gray et al., 2011). Specifically, there are two aspects that relate to this gap: first, users do not fully understand the auditor's role and responsibilities (Church et al., 2008) as there is a lack of information on the specific work undertaken and findings obtained by auditors (Humphrey et al., 2009), and second, investors – who are ultimately the auditor's clients – are missing out on the auditor's unique perspective regarding the company (Vanstraelen et al., 2012).

Although there are four types of auditor opinions – unqualified, qualified, disclaimer, and adverse – about 99 percent of audit opinions on public companies' financial statements are unqualified (Lennox, 2005; Brazel et al., 2011) providing *reasonable* assurance that the financial statements are free from material misstatements. This means that the traditional reporting has led to a pass or fail outcome and highly standardized language in audit reports. While still useful as confirming evidence, the binary model has been considered insufficient in the presence of increased information asymmetry between

investors and managers due to growing complexity in financial reporting (Ferguson, 2016). Thus, AS 3101 aims at narrowing, if not closing, the expectation gap between investors' demand for information and what is provided in the audit reports.

The new standard is the culmination of a long process that began with the U.S. Department of the Treasury's Advisory Committee on the Auditing Profession recommending in its 2008 Final Report that the PCAOB should consider making improvements to the auditor's standard reporting model. Following this recommendation, the PCAOB started a process of outreach to investors, auditors, and preparers of financial statements asking for their views on audit report. Based on the concerns expressed from investors and other financial statement users, in June 2011 the PCAOB issued a concept release on the potential changes to the audit reporting model and received 155 public comments over two years.<sup>11</sup> In August 2013, the PCAOB published the first proposal of the new auditor reporting standard, and after a long period of public outreach, in May 2016, issued another standard proposal.

During the entire process of outreach, the inclusion of CAMs as part of an expanded audit report drew particular attention and comments from all stakeholders.<sup>12</sup> The majority of the commenters shared the PCAOB's view that CAMs could help investors and other financial statement users focus on aspects of financial statements that the auditor found to be challenging. They agreed that the additional information could enable them to analyze more closely any related financial statement accounts and disclosures (Hanson, 2016). Still,

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<sup>11</sup> See the PCAOB's Concept Release at [https://pcaobus.org/Rulemaking/Docket034/Concept\\_Release.pdf](https://pcaobus.org/Rulemaking/Docket034/Concept_Release.pdf)

<sup>12</sup> Comment letters received in response to the proposed standard for the expanded auditor's report are available at: <https://pcaobus.org/Rulemaking/Pages/Docket034Comments.aspx> and <https://www.sec.gov/comments/pcaob-2017-01/pcaob201701.htm>.

some financial statement users argued that the proposal did not go far enough. For example, in its comment letter, Standard and Poor’s Rating Services, which represents one of the major credit rating agencies, mentions:

“We believe the CAMs and KAMs should include specific descriptions of how the auditor addressed each matter, and not be boilerplate language. [...] With the information and understanding gained through the audit process, the auditor has the ability to provide entity-specific information and insight beyond the binary pass-fail opinion in areas of significant risks, judgments, estimates, and assumptions.”<sup>13</sup>

Further, the CFA Institute, representing one of the major professional analysts’ associations, also commented that:

“We are also concerned that the critical audit matters must not become routine boilerplate language. [...] Discussing the critical audit matters in an entity specific, non-boilerplate manner will focus attention on issues that are essential to understanding the audit.”<sup>14</sup>

On the other side of the debate were auditors who were concerned that the requirements were too burdensome and would bring about two major issues: increased exposure to litigation risk and legal liabilities, and increased costs due to increased effort (Hanson, 2016). In providing suggestions on the proposed standard, KPMG – one of the “Big Four” audit firms – cautioned that such expansion of the auditor’s report might have unintended consequences:

“A matter may appear critical to investors in hindsight merely because it resulted in losses. In such a circumstance, the claim that the matter should have been a CAM, or that a CAM should have had more disclosure, is easily made, whether it is sincere or merely an effort to seek damages not justified

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<sup>13</sup> The full letter is available at: [https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/015b\\_standard-\\_poors.pdf?sfvrsn=424ddc6\\_0](https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/015b_standard-_poors.pdf?sfvrsn=424ddc6_0)

<sup>14</sup> The full letter is available at: [https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/232b\\_cfa\\_institute.pdf?sfvrsn=12b0fd8f\\_0](https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/232b_cfa_institute.pdf?sfvrsn=12b0fd8f_0)

by the circumstances.”<sup>15</sup>

Furthermore, the comment letter from the PwC – another “Big Four” audit firm – highlighted the two major challenges that concerned auditors:

“[T]he reproposal includes requirements that still could significantly increase litigation risk over current reporting standards. [...] [A]ny enhanced reporting requirement will likely increase litigation risk to the profession [...] [T]here will be incremental costs in analyzing and documenting which matters should be reported as a critical audit matter, drafting communications about the critical audit matter, and consulting with the National Office.”<sup>16</sup>

After considering the different perspectives from all interested parties, in June 2017, the PCAOB adopted the new auditor reporting standard, AS 3101, which was approved by the SEC in October 2017. According to AS 3101, the audit report should disclose any CAMs encountered during a *specific* audit engagement. A CAM is defined as any matter required to be communicated to the audit committee, that *relates* to accounts or disclosures that are *material* to the financial statements, and involved especially challenging, subjective, or complex auditor judgment. The CAM disclosure should include a description of the matter and principal considerations that led the auditor to determine the matter as a CAM, and how the CAM was addressed during the audit (PCAOB, 2017).

The standard intends to avoid standardized language by requiring that each CAM be specifically tailored to audit engagement circumstances (PCAOB, 2017). Further, with respect to disclosure readability, the information included in the CAM is expected to provide a clear, concise, and understandable discussion of the issue and to be at a level that

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<sup>15</sup> The full letter is available at: [https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/074c\\_kpmg.pdf?sfvrsn=c8d890b7\\_0](https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket034/074c_kpmg.pdf?sfvrsn=c8d890b7_0)

<sup>16</sup> The full letter is available at: <https://www.pwc.com/us/en/cfodirect/assets/pdf/comment-letter/pcaob-reproposal-auditors-reporting-model-standard.pdf>

investors and other financial statement users would understand (PCAOB, 2019). The guidance on plain English writing and issues to avoid when communicating in regulatory filings, in the SEC's Plain English Handbook (1998a), reinforces the expectation that auditor disclosures should be easy to read and process. Some of the issues that the SEC lists in the handbook relate to the use of lengthy sentences, superfluous and abstract words, passive voice, weak or hidden verbs, and legal and financial jargon (SEC, 1998b).

Similar requirements were already adopted by standard setters in other countries where auditors are required to disclose the key audit matters (KAMs) encountered during the audit process. Minutti-Meza (2020) summarizes the development and the implementation of the new audit reporting standards and discusses CAM requirements in the U.S. and KAM requirements in other jurisdictions. The broad expectation is that additional auditor disclosures could directly or indirectly help users to assess a company's financial reporting and audit quality. However, as noted by Audit Analytics (2021), there is an important difference in the scope of these disclosures: while KAMs are required with respect to *any* assessed high risks in the context of the entire audit, CAMs are drawn *only* from *material* accounts and disclosures in the financial statements. Another important difference stems from the strong legal shareholder protection which makes litigation risk particularly salient in the U.S. setting.

In conclusion, while CAM requirements are principle based and allow for auditor discretion, the PCAOB and other stakeholders expect that the majority of audit reports will include at least one CAM, and that the CAM disclosure will be specific to the audit engagement and explain the matter in a way that is easy to understand by the public.

## **Hypotheses Development**

### ***Litigation Risk and CAM Disclosures***

The passage of PSLRA in 1995 raised the bar for auditors to face shareholder litigation liabilities (Lee and Mande, 2003; Boone et al., 2011). In fact, in the post PSLRA period, auditors were named less often as defendants in shareholder lawsuits (Moorthy and Sarath, 2018). Even in cases when there were claims brought by shareholders, they were increasingly dismissed at early stages of the litigation process (Honigsberg et al., 2019). Lennox and Li (2020) report that auditors were rarely blamed for financial reporting failures.

However, a series of court rulings over the past decade have created precedents that impact auditor litigation exposure especially under the current reporting environment where they are required to produce, and sign expanded audit reports. Although the passage of PSLRA limited shareholders ability to sue entities other than the entity ultimately issuing the financial statements, auditors are exposed to litigation because they are responsible for their statements in the audit report (Alderman, 2020). Given the new reporting requirements in AS 3101, litigation risk has gained renewed importance for auditors. In fact, many audit firms raised the issue of increased exposure to litigation risk and associated legal liabilities because of the CAM reporting requirements, in the period of public discussion of the new standard proposal.<sup>17</sup>

Motivated by these concerns, recent experimental studies using participants that act

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<sup>17</sup> Consistent with the notion that the new requirements will make auditors lose some of the protection provided by the PSLRA, in its comment letter, Deloitte mentions that “another area of concern is the possible effect that disclosing CAMs may have on undermining efforts by Congress, which imposed the stringent pleading standards of the Private Securities Litigation Reform Act of 1995 (PSLRA), to curtail non-meritorious claims against auditors”.



as jurors examine the effects of CAMs on (*ex-post*) auditor liability. On the one hand, Backof et al. (2018) finds that, when the auditor discloses a CAM related to the misstatement litigation case, jurors assess the misstatement as being more foreseeable by auditors, and perceive auditors as being more negligent. Further, Gimbar et al. (2016) finds that jurors perceive auditors as more negligent when the audit report includes any CAMs – independently of the litigation case – because jurors perceive increased auditor control over financial reporting outcomes in the presence of a CAM disclosure. On the other hand, Brown et al. (2020) and Brasel et al. (2016) find that CAM disclosures can act as notice to forewarn users that client’s financial statements present issues, thereby reducing jurors’ perception of auditor liability. Further, Vinson et al. (2019) show that jurors will assess higher auditor negligence when a CAM is removed than when a CAM is reported, suggesting that the absence rather than the presence of a CAM may increase auditor’s litigation liabilities. Lastly, Kachelmeier et al. (2020) confirms that CAM disclosures involving measurement uncertainty may indeed have a “disclaimer” effect for CAM-related material misstatements. However, all of these studies examine *ex-post* litigation concerns. The question of how auditors respond to CAM disclosure requirements, given their concerns prior to standard adoption, remains an open empirical question.

Section 312 of SAS no. 107 provides guidance on auditor's risk considerations and describes litigation risk as a component of audit business risk. The guidance suggests that auditors should factor-in litigation risks when setting fees, planning and conducting their work, and also when issuing reports (AICPA, 2005). Literature has shown that litigation risk is a driving force of auditor’s decisions (DeFond and Zhang, 2014; DeZoort and Harrison, 2018) because auditors also face considerable reputation losses beside litigation

damages (Palmrose, 1988; Weber et al., 2008; Skinner and Srinivasan, 2012).<sup>18</sup> Given the potential financial and reputational costs at stake, auditors respond to heightened litigation risk. Consistently, extensive prior research finds that litigation risk is significantly associated with audit inputs and processes, such as audit evidence collection (Houston et al., 1999), choices of industry specialization (Hogan and Jeter, 1999), and audit fees (Simunic and Stein, 1996; Seetharaman et al., 2002; Venkataraman et al., 2008; Choi et al., 2009; Badertscher et al., 2014; Abbott et al., 2017; Bronson et al., 2017). Litigation risk also affects audit outcomes by increasing conservative reporting (Hirst, 1994; DeFond and Subramanyam, 1998; Barron et al., 2001; Gaver et al., 2012), and audit quality in general (Khurana and Raman, 2004). Further, auditor litigation risk also affects the dynamics of the relationship with the client with respect to auditor resignations (Krishnan and Krishnan, 1997; Shu, 2000), and new client acceptances (Jones and Raghunandan, 1998; Johnstone, 2000; Johnstone and Bedard, 2003; Laux and Newman, 2010; Kaplan and Williams, 2013; Hsieh and Lin, 2016). Lastly, studies show that auditors tend to mitigate the risk by lobbying for reduced legal liability (Geiger and Raghunandan, 2001).

The litigation hypothesis posits that companies can lower litigation costs through enhanced disclosures. Specifically, ex-ante litigation risk is positively associated with disclosure (Skinner, 1997) and in turn enhanced disclosure can lower subsequent litigation costs (Skinner, 1994). Consistent with this theory, extensive research has also confirmed that litigation risk affects reporting decisions. For example, Basu et al. (2018) find that IPO firms facing higher litigation risk are more likely to voluntarily disclose internal control

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<sup>18</sup> For example, Laventhol and Horwath went bankrupt in 1990 for reason related to costly lawsuits. The firm was the seventh largest audit firm at the time.

weaknesses and remediation steps in their prospectuses before going public. A large part of the audit reporting literature examines going concern reports in response to litigation risk. For example, Kaplan and Williams (2013) and Krishnan and Krishnan (1996) find that higher perceived litigation risk increases the likelihood that the auditor issues a going concern report. On the other hand, when litigation risk was reduced as a result of the PSLRA, auditors were less likely to issue going concern modified audit reports to bankrupt companies (Geiger and Raghunandan, 2001). Also, even in the midst of the 2007-2009 financial crisis, auditors reported fewer going concern opinions to risky banks when they faced lower litigation risk (Albrecht et al., 2020). Further, exploiting state-level shocks in auditor legal liability over the period 1982-1998, research reports that the increase in litigation risk led to a general increase in going concern opinions (Chy et al., 2021), especially for financially distressed clients (Anantharaman et al., 2016). Lastly, Fargher and Jiang (2008) shows that auditors were more likely to issue going-concern opinions to financially stressed companies immediately after the high-profile corporate collapses during the period 2000-2002, as the result of auditor increased visibility and exposure to litigation risk.<sup>19</sup>

Overall, theory and research evidence suggest that when litigation risk is higher, auditors may issue a report that serves as a forewarning to financial statement users in order to preempt negative consequences from shareholder lawsuits such as legal liabilities and reputational costs. In the same way, in the current reporting environment, I expect that

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<sup>19</sup> Krishnan and Zhang (2005) find that clients with higher litigation risk are less likely to include audit reviews in their quarterly reports. However, while the review is from the auditor, client has the ultimate choice to voluntarily include it in the 10-Q filing and may consider it redundant to the audit report on the annual financial statements.

auditors will report more CAMs in the presence of high litigation risk.

**H1a. *Litigation risk is positively associated with the number of CAMs disclosed in the audit report.***

Next, I consider CAM disclosure textual quality as a multifaceted construct that includes the characteristics of readability of the text, use of standardized (boilerplate) language, and the length of the text. With respect to readability, the PCAOB recommends that CAM disclosures be clear and concise and discuss the issues at a level that financial statement users would understand (PCAOB, 2019). This expectation is reinforced when referring to the requirements in the SEC's Plain English Mandate, Rule 421(d), adopted since 1998 to address concerns relating to unreadable public company filings. However, ensuring readability and understandability from the perspective of public investors might be particularly challenging in the presence of high litigation risk. In one of the first studies to examine the readability of financial reporting, Li (2008) finds a negative association between annual reports readability and company performance. While that study suggests that lengthy and less readable disclosures are used to hide bad performance, Bloomfield (2008) argues that preparers may also issue less readable disclosures in order to shield themselves from litigation. On the other hand, Nelson and Pritchard (2007) examine firms' voluntary disclosure and find that firms subject to greater litigation risk have more readable disclosures. Consistent with the notion of auditors being cautious of litigation risk, Czerney et al. (2017) find that when Big 4 auditors face higher litigation exposure, they are more likely to constrain management's use of optimistic language in the notes to the financial statements. However, the study does not examine other textual attributes of disclosure such as readability or boilerplate language. Overall, there is no evidence that directly connects

auditor litigation risk to financial reporting readability, much less to audit report readability. Hence, it is not clear *ex-ante* how auditors will respond to litigation risk when preparing CAM disclosures.

Next, with respect to the use of boilerplate language, the PCAOB requires that CAM disclosures be tailored to reflect specific circumstances of the critical matter (PCAOB, 2017). The main criticism of the traditional audit report was that it contained highly standardized language under the pass/fail model. With the new reporting requirements in place, if the language used to discuss the issues is not sufficiently specific, then CAM disclosures may not achieve their goal (Audit Analytics, 2021). However, litigation risk poses a particular challenge to auditors in providing tailored disclosures, especially if legal advisers, known for using standardized language, get involved in preparing the disclosures. In developing the theory of boilerplate economics, Kahan and Klausner (1997) suggests that companies may obtain advantages from the use of lengthy and boilerplate language in contracts. The theory posits that besides a learning effect from copying contracts language from peers, the use of boilerplate may also protect from future litigations. For example, Cazier et al. (2020) finds that lengthier and more boilerplate risk factor disclosures are less likely to be considered inadequate in judicial reviews. Specific to my setting, auditors had a two-year period to prepare for meeting the new disclosure requirements. As part of the preparations, audit firms trained auditors how to prepare CAM disclosures in a “dry run” process that may have generated CAM templates that use standardized language. Overall, between the PCAOB’s expectations and the litigation risk, auditors face two countervailing forces and it is not clear *ex ante* how they will respond when crafting CAM disclosures. Hence, I state my next hypothesis in the null form.

**H1b. *Litigation risk is not associated with the textual quality of CAM disclosures in the audit report.***

### ***Financial Reporting Quality and CAM Disclosures***

The role of the auditor as intermediary between companies and investors is very important to the well-functioning of the capital markets. However, the traditional model has led to an audit report that provides little information to financial statements users. An unqualified audit report provides investors with reasonable assurance that the financial statements are free from material misstatement. About 99 percent of audit reports are unqualified (Lennox, 2005; Brazel et al., 2011), meaning that audit reports have simply reflected a pass or fail outcome with mostly boilerplate wording. This binary model has made it difficult for financial statements users to infer anything with respect to the relative financial reporting quality and audit quality of public companies from audit reports (Christensen et al., 2019).

There have been two cases of departures from the binary unqualified reports: going concern reports and unqualified reports with emphasis of a matter. First, the going concern opinion communicates auditor's substantial doubt on client's ability to continue as a going concern. Research has evidenced that even such rare variations from the standard unqualified reports may convey information about financial reporting quality. For example, Bartov et al. (2000) finds that discretionary accruals are positively associated with the probability of a modified opinion. Second, in many cases auditors have added explanatory paragraphs in the traditional unqualified audit report when they wanted to emphasize a matter regarding the client's financial statements. Although these emphasis paragraphs were not required, enabled by professional standards, auditors have often used them to

draw attention to significant events and transactions.<sup>20</sup> Czerney et al. (2014) examines the association between the emphasis paragraphs and financial statements quality and finds that financial statements with audit reports containing additional explanatory language are significantly more likely to be subsequently restated than financial statements without such language.

Overall, these results support the notion that auditors are willing to expand their reports in order to convey the inherent quality of financial statements. Obviously, the more problems a client has with the financial reporting the more likely the auditor faces a high number of critical issues during the audit. Hence, I expect that auditors will issue relatively more CAMs when clients face a higher number of accounting issues and state my next hypothesis in the alternative form.

***H2a. Financial reporting quality is negatively associated with the number of CAMs in the audit report.***

From the perspective of textual quality of CAM disclosure, it is ex ante unclear as to how the financial reporting quality relates to each of textual characteristics: readability, boilerplate, and length. On the one hand, regulators have always been concerned with the readability of public companies reporting and disclosures (SEC, 1998a) and the boilerplate wording in audit reports (PCAOB, 2017). Hence, regulators' expectations and professional standards requirements imply that auditors will carefully craft CAM disclosures in order to explain clearly and understandably the critical issues, while referring to the specifics of each audit engagement. On the other hand, literature has evidenced a number of problems

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<sup>20</sup> Brazel et al. (2011) report that about a third of audit reports contain an emphasis of a matter paragraph.

affecting textual attributes of disclosure. For example, Lo et al. (2017) examines the management discussion and analysis section of annual reports and find that companies more likely to have managed accruals have less readable disclosures. The study suggests that companies use the lower readability to obfuscate the low earnings quality. Consistent with this obfuscation theory, Li (2008) suggests that preparers are more likely to issue less readable annual reports when hiding poor company performance. However, Bloomfield (2008) advances the information theory as an alternative explanation, which suggests that the lower readability is explained by the fact that it is inherently more difficult to write about problems that companies face when their performance is poor. Next, with regards to boilerplate disclosures and financial reporting quality, the literature is silent, especially when it comes to audit disclosures.

Auditors may also face challenges from CAMs becoming a source of disagreement or tension with the client since these disclosures relate to matters that are both critical and material. Prior literature examining the behavior of “unhappy” clients provides evidence of a higher likelihood of client loss when the auditors issue a qualified (unfavorable) opinion (e.g., Chow and Rice, 1982; Craswell, 1988; Citron and Taffler, 1992; Krishnan et al., 1996). In fact, not only do clients dismiss the audit firm more often after receiving a modified opinion, they also successfully shop for an audit firm or audit partner that would issue a favorable opinion (Lennox, 2000; Chen et al., 2016; Chung et al., 2019). Ettredge et al. (2011) and Newton et al. (2016) show that clients engage successfully also in shopping for clean internal control opinions. Furthermore, the loss of a client can have a negative domino effect on other clients, too. For example, Cowle and Rowe (2018) find that following the issuance of an internal control material weakness audit opinion, the audit



firm experiences an overall decrease in future clients and fee growth suggesting that the audit market penalizes auditors for reporting information critical of management.

While the new requirements have placed companies and their auditors under relatively more careful scrutiny (Minutti-Meza, 2020), auditors may also be compelled to tailor the disclosure in a way that does not place them and their client in a negative light. The number of CAMs represents a quantitative disclosure which is more easily verifiable (Baginski et al., 2016) and may grant less degrees of freedom to the auditor when preparing the disclosures. Unlike the number, the lexical features of CAMs represent qualitative disclosure attributes which are more difficult to verify and connect to the actual reporting quality, and sometimes may even share characteristics of “cheap talk” (Baginski et al., 2016). Therefore, they give auditors higher degrees of freedom in protecting their clients and mitigating the risk of future losses in the audit market.

Given that auditors have more discretion over the textual properties of CAM disclosures, it is unclear to what extent these characteristics will respond to the quality of client’s financial reporting. Hence my next hypothesis in the null form.

***H2b. Financial reporting quality is not associated with the textual quality of CAM disclosures in the audit report.***

***Financial Reporting Quality and CAM Disclosures in Presence of Litigation Risk***

Next, I focus on the relation between financial reporting quality and CAM disclosures in presence of litigation risk, posing the question of whether auditors behave more conservatively in such instances by reporting more CAMs. DeFond and Zhang (2014) argue that auditors may respond to litigation risk by being “too quick” to issue going

concern opinions. Literature notes that auditors make Type I errors more than 90 percent of the time, where clients receive going concern opinions, but a bankruptcy does not occur within the subsequent year (e.g., Geiger et al., 2005; Carson et al., 2013). This suggests that auditors will tend to report even more conservatively in presence of litigation risk. Especially, auditors may be incentivized to conduct defensive audits which can also entail extra cautious reporting if clients present lower earnings quality. The audit literature provides at least three reasons for why auditors may report over-conservatively. The first reason relates to the audit environment where auditors might be sued especially because of their “deep pockets”. As noted in Dye (1993), in presence of litigation risk auditors have even greater incentive to give accurate reports because investors are more likely to investigate the quality of audit, since the auditor is typically the party associated with their company that has sufficiently "deep pockets" to compensate for their losses. In providing evidence to the deep pockets’ hypothesis, Lennox (1999) argues that auditors are sued for issuing reports that are insufficiently conservative, they are not sued for being too conservative. This implies that auditors may engage in overly cautious reporting when facing high litigation risk. The second reason relates to jurors’ assessment of auditor culpability. Prior studies have shown that auditors are sometimes found negligent even in cases when conducting high-quality audits (e.g., Backof, 2015; Maksymov and Nelson, 2017). The potential of dysfunctional culpability verdicts incentivizes auditors to engage in defensive reporting since the audit report is obviously the strongest defense tool in a shareholder lawsuit. Next, there is an asymmetry in rewards versus punishments, whereby auditors are punished for failures in a higher magnitude than they are rewarded for successes (Peecher et al., 2013). This is in line with the notion in Lennox (1999) that

auditors are sued for not being sufficiently conservative and suggests that in circumstances when litigation risk is high, auditors are more likely to be accurate when reporting on the quality of client's financial statements. Lastly, another reason might be that auditors tend to overestimate legal liabilities from litigation. In a recent study, Gimbar and Mercer (2021) examine whether auditors can accurately predict litigation outcomes. They provide auditors with case facts from an auditor negligence lawsuit and ask them to make predictions on the verdicts. The study reports that auditors tend to overestimate the negative consequences from litigation.

Based on these arguments, it is likely that litigation risk will accentuate any existing association between financial reporting quality and CAM disclosures quantity and textual quality. Hence the third set of hypotheses:

***H3a. The interaction between litigation risk and financial reporting quality is negatively associated with the number of CAMs in the audit report.***

***H3b. The interaction between litigation risk and financial reporting quality is not associated with the textual quality of CAM disclosures in the audit report.***

### ***CAM Disclosures and Audit Costs and Effort***

I now turn the focus on the second area of auditor concern which relates to new reporting requirements bringing about an increase in audit costs due to increased audit effort. AS 3101 requires that each reported CAM include a description of the CAM and principal considerations that led the auditor to determine that the matter is a CAM, and an explanation of the auditor's response to address the issue during the audit. Thus, relative

to the traditional pass/fail, the new model represents a significant expansion to the audit report which may lead to increased audit effort due to a change in both, the quantity and textual quality of disclosures. For example, EY has cautioned on an increase in audit fees stating that “the cost of expanded audit procedures to comply with the standard, will in all likelihood inevitably be passed onto registrants”.

Quantitatively, auditors would spend more audit hours when the number of critical matters they address, and that they need to report, increases. Therefore, I expect higher audit effort as the number of CAMs disclosed in the audit report increases. Several studies examining audit fees changes as the results of new audit reporting standards in other jurisdictions, provide mixed findings. One set of studies examine the impact of audit reporting changes in the United Kingdom, Hong Kong and Mainland China, using pre-post analysis and finds no evidence of a significant increase in audit fees (e.g., Reid et al., 2019; Gutierrez et al., 2018; Lennox et al., 2019; Liao et al., 2019). On the other hand, Li et al. (2018) investigates the impact of new audit reporting standards on audit fees in the New Zealand and finds evidence of a significant increase in audit fees. In the U.S. context, recent literature does not provide evidence of an effect of audit reporting standard changes on audit fees (e.g., Bochkay et al. 2020; Burke et al. 2020).

However, the evidence from cross-sectional analysis in some of these studies suggests that companies pay relatively higher fees when the audit report includes a higher number of material risks (Gutierrez et al., 2018) or CAM disclosures (Burke et al. 2020). Further, public accounting firms have noted that they have been preparing to meet the new reporting requirements by training auditors and conducting CAM disclosure practice sessions, prior to the standard effective date. The anecdotal evidence from these sessions

suggests that additional auditor hours appear to be necessary in order to identify, draft, review, discuss, and disclose more CAMs in the audit report (CAQ, 2018b). Therefore, I expect that audit effort and costs will be relatively higher when the audit report includes a higher number of CAMs. Hence, I present my hypothesis in the alternative form.

**H4a. *The number of CAMs in the audit report is positively associated with audit costs (effort).***

I acknowledge that, due to audit market competition, audit firms might not be able to transfer the additional costs to client firms and are constrained to absorb this burden, and that the training sessions might have prepared auditors to effortlessly draft and report the critical matters. Any effects from these factors biases against my predicted results.

Finally, I consider CAM disclosure quality that includes aspects of text readability, standardized language, and text length. Complying with disclosure requirements, in terms of tailoring the disclosure to avoid boilerplate and reflect specific circumstances of the matter, while ensuring high readability and understandability from the perspective of public investors, may also require additional hours in preparing the audit report.

However, the evidence from similar studies seems inconclusive. Gutierrez et al. (2018) shows that audit fees increase as the auditor reports in the United Kingdom become longer. Also, Chen et al. (2020) finds that textual features of KAM disclosures, such as length and complexity, are reflected in the pricing of audit services for Hong Kong publicly listed companies. On the contrary, using the same setting, Liao et al. (2019) do not find any evidence that audit fees vary with the KAM length of discussion.

Even if the CAM text length requires more effort, using standardized language may

reduce the time needed to prepare the disclosure. This is especially true if the training sessions were used by audit firms to develop CAM templates. The boilerplate theory from legal contracts literature suggests that firms may reduce their effort by “borrowing language” in financial statements footnote disclosures, especially through a shared auditor (McMullin, 2016). Therefore, it is not clear ex-ante whether and how audit costs and effort vary with CAM disclosure length or use of standardized language.

Last, readability is a textual feature of which effects also remain unclear. On the one hand, more time and effort may be required in order to craft and prepare more readable disclosures. On the other hand, less readable disclosures may relate to CAMs that are inherently more complex and more difficult to explain; thus, also requiring more time and effort. Given the different aspects of CAM disclosures’ textual quality and the above arguments, I state my last hypothesis in the null form.

**H4b. *CAM disclosure textual quality is not associated with audit costs (effort).***

## CHAPTER 3

### RESEARCH DESIGN

#### **Sample Construction and Main Variables**

##### *Sample*

Since June 30, 2019, auditors have started to disclose CAMs in the audit report. I obtain from Audit Analytics data feed the text files for each CAM containing both components: Description and Response. I limit my sample period to February 29, 2020 for the auditor signature date in order to control for possible changes in auditor's reporting behavior due to negative consequences from the COVID-19 pandemic. Using the unique CAM number, I merge the CAM data with data from Audit Analytics on audit firms, audit partners identity, and other audit information. Last, I add client accounting data from Compustat and the data on financial reporting complexity based on XBRL tags developed in Hoitash and Hoitash (2018).<sup>21</sup> I allow the sample to vary across tests depending on data availability.

##### *CAM Variables*

The first CAM variable is the number of CAMs disclosed in each audit report (*nrCAMs*). Next, to capture the textual quality of CAM disclosures, I use readability, the extent of boilerplate, and the text length. I measure CAM readability (*Cam\_Bog*) and the readabilities of each component, Description (*Descr\_Bog*) and Response (*Resp\_Bog*), using the Bog index. The measure captures the plain English writing attributes

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<sup>21</sup> I thank the authors for making this data available.

recommended by linguistics experts and highlighted in the SEC’s Plain English Handbook (SEC, 1998b). This measure was introduced and validated using a mixed research method in Bonsall IV et al. (2017) and is constructed using the *StyleWriter* software. The Bog index rates the style and readability of a document according to document type and the target audience. I set these criteria as “Report” and “Public”, respectively, consistent with the type of auditor report and the targeted public audience. The index formula considers three elements: *Sentence Bog* identifies readability issues stemming from sentence length and is higher for longer sentences; *Word Bog* captures writing issues (e.g., overwriting, passive verbs, wording phrases) and word difficulty based on a proprietary list of more than 200,000 graded words; and *Pep* reduces the index because it captures writing attributes that facilitate the understanding of a text by summing items such as interesting words and sentence variety. Thus, the Bog index overcomes criticisms of traditional readability measures that are based on the simple count of words and word syllables (Loughran and McDonald, 2014). Appendix A explains in more detail the formula used from the *StyleWriter* software to determine *Bog* index scores, and also presents two examples of low and high CAM readability.

Next, to construct the boilerplate measure I use *WCopyFind* – a plagiarism detection software that compares documents and reports their language similarities after identifying overlaps in multi word phrases. Prior accounting literature has employed this software to detect the language similarity in companies’ footnote disclosures (McMullin, 2016), in corporate disclosure pre- and post-spinoff (Campbell et al., 2020), and in risk factor disclosures among industry peers (Cazier et al. 2020). The software determines the language similarity (*Similarity\_score*) between CAM pairs based on the matched words in



text strings of at least six words in length. CAMs with large (low) frequency of matches have relatively high (low) language similarity. Appendix B explains in more detail the method used from the *WCOPYFind* software, the parameters, and also presents examples of CAM language similarity. To determine the CAM boilerplate score (*Boilerplate*), I average all the similarity scores at the CAM level.

My last variable is based on the number of words in CAM disclosures (*Cam\_#words*). The measure is often used in textual analysis literature (Loughran and McDonald, 2014) and is employed in regression analysis as the natural log of the number of words (*Ln\_words*) contained in a document.

### ***Other Main Variables***

The proxy for litigation risk is based on the notion that auditor litigation risk of shareholders lawsuits arises solely from the association with the client (Bell et al., 2001). Hence, following prior literature on client litigation risk (e.g., Francis et al., 1994; Ali and Kallapur, 2001; Matsumoto, 2002; Brown and Tucker, 2011; Donelson et al., 2012; Cassell et al., 2013) I create an indicator variable, *Litigation*, equal to one for client firms in highly litigious industries such as biotechnology (SIC codes 2833-2836), computers (SIC codes 3570-3577 and 7370-7374), electronics (SIC codes 3600-3674), and retailing (SIC codes 5200-5961), and zero otherwise.<sup>22</sup> In additional analyses, I also use measures constructed at the audit and the client level, respectively. To proxy for financial reporting quality, I use the absolute value of discretionary accruals (*Abs\_da*) estimated from a regression based on

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<sup>22</sup> Kim and Skinner (2012) develop a prediction model for litigation risk. However, the construct of interest in this paper is the perceived litigation risk rather than auditor's accuracy in predicting future litigations. To the extent that auditor perceptions are formed by client litigation history, the measure from Francis et al. (1994) becomes even more relevant, since Kim and Skinner (2012) show that these industries, indeed, have historically higher litigation rates than other industries.

the Jones (1991) modified model (Dechow et al. 1995) as adjusted for performance in Kothari et al. (2005). By construction, higher values of absolute discretionary accruals indicate lower financial reporting quality. Lastly, audit fees and audit report time lag from the fiscal-year end date are used to measure audit costs and effort. See Appendix C for all variable definitions.

## **Empirical Models**

### ***Litigation Risk, Financial Reporting Quality, and CAM Disclosures***

My first set of analyses focus on investigating whether CAM disclosure measures are associated with litigation risk, financial reporting quality, and the interaction between these two factors. To develop the empirical model, I rely on research that examines audit reports in response to litigation risk (e.g., Krishnan and Krishnan, 1996; Kaplan and Williams, 2013; DeFond and Zhang, 2014; Lys and Watts, 1994; Stice, 1991), and recent research that examines expanded audit reports (e.g., Gutierrez et al., 2018; Reid et al., 2019; Sierra-García et al., 2019; Chen et al., 2020). Model 1 tests simultaneously for the associations under examination.

$$\begin{aligned}
 CAM = & \beta_0 + \beta_1(Litigation) + \beta_2(Abs\_DA) + \beta_3(Litigation \times Abs\_DA) + \beta_4(Tenure) \\
 & + \beta_5(Big4) + \beta_6(IndSpecial) + \beta_7(Busy) + \beta_8(Ln\_ARC) + \beta_9(Size) + \beta_{10}(Countweak) \\
 & + \beta_{11}(Mtb) + \beta_{12}(Roa) + \beta_{13}(Leverage) + \beta_{14}(Loss) + \beta_{15}(Exter\_fin) + \beta_{16}(Restruct) \\
 & + \beta_{17}(Complexity) + \beta_{18}(Inventory) + \beta_{19}(Receivables) + IND + \varepsilon \quad (1)
 \end{aligned}$$

where CAM represents one of the CAM disclosure measures as explained in the previous section. When the dependent variable is the number of CAMs (*nrCAMs*), I employ negative binomial regression for count data and the unit of analysis is the client (or audit report) level. The Bog scores are log transformed and multiplied by -1 (Cassell et al., 2019) to determine the variable *Read\_Bog* so that higher values indicate greater readability. When estimating textual variables of readability (*Read\_Bog*), boilerplate (*Boilerplate*), or text length (*Ln\_words*), I use OLS regression analysis at the CAM level. Since the same client can have multiple CAMs, I cluster the robust standard errors at the client level (Cameron and Miller, 2015). *Litigation* is an indicator equal to one when the client operates in a litigious industry and zero otherwise. H1a predicts a positive and significant  $\beta_1$  coefficient when the dependent variable is *nrCAMs*. The absolute value of discretionary accruals (*Abs\_DA*) measures financial reporting quality. H2a predicts a positive and significant  $\beta_2$  coefficient when the dependent variable is *nrCAMs*. The interaction term *Litigation x Abs\_DA* captures the incremental effect of financial reporting quality on CAMs in the presence of high litigation risk. H3a predicts a positive and significant  $\beta_3$  coefficient when the dependent variable is *nrCAMs*. Based on hypotheses H1b, H2b, and H3b, there are no signed expectations on the coefficients when the dependent variables are *Read\_Bog*, *Boilerplate*, or *Ln\_words*.

To control for auditor characteristics that literature suggests are important to audit reporting (e.g., DeFond and Zhang, 2014), the model includes auditor size (*Big4*), familiarity with client's issues (*Tenure*), industry specialization (*IndSpecial*), and a busy reporting season (*Busy*). It also controls for issues potentially arising from client's internal controls, accounting reporting complexity, or other business operations and activities that

could affect the variables of interest. Hence, *Countweak* is the number of internal control weaknesses over financial reporting; *Ln\_ARC* is the log value of unique XBRL tags per financial statement constructed in Hoitash and Hoitash (2018); *Complexity* is the log value of the number of operating segments; *Receivables* is the amount of accounts receivable scaled by total assets; and *Inventory* is the total value of inventory scaled by total assets. I also control for events that could make the audit process more challenging by including the variable *Restruct* that captures whether the firm underwent any restructuring during the fiscal year. Moreover, firms that experience a loss or financial distress may systematically differ from other firms in terms of litigation risk or financial reporting. Thus, the model controls for net loss (*Loss*), debt (*Leverage*), and external financing (*Exter\_fin*). Next, I control for other firm characteristics typically affecting reporting quality such as total assets (*Size*), performance (*Roa*), and growth (*Mtb*). Lastly, to capture any residual systematic differences, I include industry fixed effects (*IND*).

### ***CAM Disclosures and Audit Fees and Report Delay***

To test my last set of hypotheses, I rely on the vast prior research that examines audit fees. Following the literature that develops the audit fees model (e.g., Hay et al., 2006; Simunic and Stein, 1996; Simunic, 1980) and the recent literature that has examined audit fees as the result of expanded auditor report in other institutional settings (e.g., Reid et al., 2019; Gutierrez et al., 2018; Li et al., 2018), I estimate the following OLS regression model:

$$\begin{aligned}
Ln\_AFees \text{ (or } Ln\_Replag) &= \gamma_0 + \gamma_1(CAMs) + \gamma_2(Big4) + \gamma_3(IndSpecial) + \gamma_4(Busy) \\
&+ \gamma_5(Tenure) + \gamma_6(Size) + \gamma_7(Countweak) + \gamma_8(Complexity) \\
&+ \gamma_9(Age) + \gamma_{10}(Restruct) + \gamma_{11}(Cfo) + \gamma_{12}(Receivables) \\
&+ \gamma_{13}(Inventory) + \gamma_{14}(Loss) + \gamma_{15}(Mtb) + \gamma_{16}(Roa) + \gamma_{17}(Exter\_fin) \\
&+ \gamma_{18}(Zscore) + \gamma_{19}(Litigation) + \gamma_{20}(Abs\_da) + IND + \varepsilon \quad (2)
\end{aligned}$$

where the dependent variable is either the logarithm of audit fees plus one ( $Ln\_AFees$ ) or the audit report lag ( $Ln\_Replag$ ) calculated as the logarithm of one plus the number of days between the fiscal year-end date and the auditor signature date. When the independent variable is the number of CAMs communicated in the audit report ( $nrCAMs$ ), the unit of analysis is the individual client (or audit report), and H4a predicts a positive and significant  $\gamma_1$  coefficient. The independent variables for CAM textual analysis include readability which is determined as the natural log of Bog scores multiplied by -1 ( $Read\_Bog$ ), the boilerplate language ( $Boilerplate$ ), and text length ( $Ln\_words$ ). H4b does not make a sign prediction on  $\gamma_1$  coefficient of CAM textual analysis variables. The unit of analysis is the individual CAM, and since the same client can have multiple CAMs, I cluster the robust standard errors at the client level (Cameron and Miller, 2015).

The model considers several client and auditor characteristics that are important to audit effort and costs. Since audit effort may vary based on financial reporting season and quality and expertise of the auditor, the model controls for auditor quality ( $Big4$ ), industry specialization ( $IndSpecial$ ), knowledge of client ( $Tenure$ ) and busy season ( $Busy$ ). Next, larger and more complex client firms require greater effort from the auditor during the audit

engagement. Therefore, I control for client total assets (*Size*), operating segments (*Complexity*), cash flows from operations (*Cfo*), inventories (*Inventory*), and accounts receivable (*Receivables*). The model also controls for the effect of weaknesses in the internal controls over financial reporting (*Countweak*) and restructuring events (*Restruct*) on both, audit effort and critical matters in audit report. I also include control variables that capture difficulties in the audit arising from client performance (*Roa*), operating loss (*Loss*) and financial distress (*Exter\_fin*, *Zscore*). I also consider cases when auditing may require different levels of effort depending on client growth (*Mtb*) and life cycle (*Age*). Moreover, I control for quality of financial reporting and litigation risk (e.g., Abbott et al. 2017; Bronson et al. 2017). To capture any other systematic differences in audit effort across industries, I include industry fixed effects based on the two-digit SIC codes (*IND*).

## CHAPTER 4

### RESULTS

#### **Descriptive Statistics and Univariate Results**

Table 1 reports the number of CAMs per each topic. I create the frequency distribution of CAMs across several topics using the taxonomy from Drake et al. (2020, pg.26).

Figure 1a provides a visual illustration of the distribution of CAMs by topic. From a total of 3,124 reported CAMs, the most frequent categories are *Intangible* assets including Goodwill (16 percent), *Revenues* (15 percent), *M&A* or business combinations (12 percent), and *Taxes* (10 percent). The financial reporting issues represent about 6 percent of the total CAMs and include, among others, matters related to internal controls, policy changes, and related party transactions. The less frequent CAMs are included in the category *Other* and relate to foreign currency, regulatory assets and liabilities, shareholder valuation, SG&A, vendors, other expenses, other liabilities, balance sheet classification, and fresh start accounting. For more details on CAM categories (as defined by Drake et al. 2020) refer to Appendix D.

Figure 1b shows CAM frequency by auditor. EY has disclosed the highest number of CAMs, about 31 percent of the total, followed by PwC (23 percent), Deloitte (19 percent), and KPMG (19 percent). Other non-Big 4 auditors overall disclosed less than ten percent. This is not surprising given that in the first year CAM disclosure requirements apply only to large companies that are mostly audited by larger audit firms.

The number of CAMs per audit report ranges from one to five (Figure 1c) and the

majority (52 percent) of audit reports disclose only one CAM. All client firms received at least one CAM in the audit report, and this is consistent with the expectation mentioned in the standard (AS 3101.12).

Even at the client level, EY has the highest average number of CAMs per report (Figure 2a). Surprisingly, smaller audit firms, also issue a higher average number of CAMs per report compared to the remaining big four audit firms.

In Table 2, Panel A shows the descriptive statistics for the full sample at the audit report (or client) level. The average number of disclosed CAMs is 1.65 per audit report. Unsurprisingly, 90 percent of the sample client firms are audited by one of the big four public accounting firms and in 63 percent of the sample observations the auditor is an industry specialist. The average auditor tenure with the client is about 15 years. The table shows that 24 percent of client firms have high litigation risk and the proportion of discretionary accruals to total assets ranges from zero to 41 percent. Further, 19 percent of client firms experienced a loss in earnings, and less than 25 percent have a range of one to six material weaknesses in the internal controls over financial reporting. The average client firm has total assets (*Size*) of about \$440 million, has been operating as a public firm for 23 years, pays \$5.12 million in audit fees, and experiences an audit report lag of about 54 days.

The results produced by the *StyleWriter* software show that readability of CAMs (*Cam\_Bog*) ranges from 56 to 238 with an average score of 114 (Table 2, Panel B). By construction, higher values of Bog indicate lower document readability, and the threshold that *StyleWriter* sets to the rate of “Excellent Writing” of a public report is a score of 30. Therefore, none of the CAMs disclosed represents excellent writing. To put these measures



in perspective, Bonsall IV et al. (2017) shows that the mean Bog of 10-K and management prospectus filings are about 84 and 86, respectively. This is consistent with the results of Cassell et al. (2019), who also find that while the SEC initial comment letters have a mean Bog index of 60, the companies' responses appear more difficult to read as the mean Bog index is 78. Therefore, auditor CAM disclosures readability as measured by the Bog index is lower, on average, than company filings and SEC comment letters. When examining each of the components, Description and Response, separately, the results show that Bog scores of Descriptions (*Descr\_Bog*) range from 27 to 365, and of Response (*Resp\_Bog*) range from 0 to 576.<sup>23</sup> These scores suggest a higher variation in components' readability relative to the entire CAM. Further, the number of words in CAMs (*Cam\_#words*) ranges from 122 to 1,109 with a mean of 360 words.

Table 2, Panel C, shows that *Similarity\_scores* produced by the *StyleWriter* software ranges between 20 and 517; on average, CAMs share about 48 words in any text strings that are longer than six words. Given the average of 360 number of words in a CAM, the average portion of CAMs that gets repeated is 13.33 percent. To put these figures in perspective, McMullin (2016) reports a similarity of 9.7 percent in financial statements footnotes of companies sharing the same auditor. Also, De Franco et al. (2020) shows an auditor-related MD&A similarity of 10.93 percent. Comparatively, auditor CAM disclosures appear to represent a higher language re-use, i.e., boilerplate language. However, this average is lower than the average similarity of 33 percent in risk disclosures reported in Cazier et al. (2020).

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<sup>23</sup> The zero minimum values in the Response do not imply maximum readability. Indeed, they represent the few cases of Going Concern CAM topic where the auditor does not provide any explanations of how they addressed the matter during the audit and are dropped from the multivariate analysis.

As shown in Figure 2b, among the big four audit firms, on average, PwC has the most frequent language re-use (boilerplate) and Deloitte has the least, 29.45 and 8.41, respectively, while their CAMs are very similar in length, 416.86 and 403.28, respectively. On the other hand, KPMG has the most readable (96.85) and short CAMs (284.83), on average. Lastly, the average values of CAM variables for all other audit firms are very similar (comparable) to those for big four firms.

Table 3 shows correlation coefficients between the variables. There is a positive correlation between litigation risk (*Litigation*) and the number of CAMs (*nrCAMs*). Also, *Litigation* is positively correlated with readability and negatively correlated with *Boilerplate* and CAM disclosures text length. On the other hand, absolute value of discretionary accruals (*Abs\_DA*) is positively correlated with the number of CAMs (*nrCAMs*) and negatively correlated with the readability (*Read\_bog(CAM)*), boilerplate (*Boilerplate*), and text length (*Ln\_words(CAM)*) of CAM disclosures. Next, audit fees (*Ln\_AFees*) are positively correlated with the number, boilerplate language, and text length of CAMs and negatively correlated with CAM readability. Last, the audit report lag is positively associated with the number and readability of CAMs.

## **Regression Results**

### ***Litigation Risk, Financial Reporting Quality, and CAM Disclosures***

Table 4 reports the results from model 1 when the dependent variable is the number of CAMs (*nrCAMs*). The first column shows the results before adding the interaction term while the second column shows the results from the specification that includes the interaction term *Litigation x Abs\_DA*. In both columns, the coefficient on *Litigation* is positive and highly significant (0.1537,  $p < 0.01$ ; 0.1891,  $p < 0.01$ ) which suggests a positive

association between auditor litigation risk and number of CAMs in the audit report, providing support for H1a. Further, the coefficient on *Abs\_DA* is positive and significant in both columns (0.9392,  $p < 0.01$ ; 1.2408,  $p < 0.01$ ) which suggests a negative association between financial reporting quality and number of CAMs in the audit report, providing support for H2a. Lastly, the coefficient on the interaction term is not significant, thus, H3a is not supported. With regard to the control variables, the number of reported CAMs is positively associated with client firm size (*Size*), financial reporting complexity (*Ln\_ARC*), and restructuring events (*Restruct*). Meanwhile, the big four public accounting firms (*Big4*) seem to disclose relatively fewer CAMs per report.

In Table 5, Column 1 shows the results when the dependent variable is *Read\_Bog* and the unit of analysis is the individual CAM. The coefficient on *Litigation* is not significant. Even when examining separately each CAM component – Description of the matter (column 2) and auditor Response (column 3) – the results do not support any association between litigation risk and readability. Thus, I cannot reject the null in H1b. Similarly, the coefficient on *Abs\_DA* is not significant, and I conclude that I cannot reject the null in H2b. The coefficient on the interaction term between *Litigation* and *Abs\_DA* (column 2) is significantly negative (-0.6406,  $p < 0.01$ ) suggesting that in presence of high litigation risk, CAMs become less readable and understandable as the absolute value of discretionary accruals increases. The textual analysis literature advances two explanations for less readable disclosures: on the one hand, information hypothesis (Bloomfield, 2008) predicts that the lower readability is caused by the complexity of the issues that are being discussed. On the other hand, obfuscation hypothesis (e.g., Lo et al., 2017) predicts that companies issue less readable documents in order to obfuscate the “bad news”. If the issue

discussed in CAMs are complex, then we would expect that Description components are harder to read. Interestingly, results from examining each component separately suggest that the significance on the interaction coefficient is because the auditor Response component (column 4) is less readable (-0.9816,  $p < 0.01$ ) and not because the issue is inherently more complex to describe as the coefficient in column 3 is not significant. Thus, the results seem to support the obfuscation hypothesis.

Next, I examine the variation in CAM boilerplate language depending on litigation risk, financial reporting quality and the interaction between the two. Table 6 reports the results from OLS regression analysis when the dependent variable is the natural log of *Boilerplate*. The first column shows the results before adding the interaction term while the second column shows the results from the specification that includes the interaction term *Litigation x Abs\_DA*. In both columns, the coefficient on *Litigation* is negative and significant (-0.1800,  $p < 0.05$ ; -0.2544,  $p < 0.01$ ) which suggests a negative association between auditor litigation risk and language similarity between CAMs. The coefficient on *Abs\_DA* is not significant. However, the coefficient on the interaction term (*Litigation x Abs\_DA*) is positive and significant (1.8205,  $p < 0.10$ ) suggesting that in presence of litigation risk the financial reporting quality is negatively associated with *Boilerplate*. These results suggests that in presence of litigation risk, auditors are more likely to be specific when disclosing CAMs – however, when the quality of financial reporting is low auditors are likely to default to boilerplate language.

Last, I examine the variation in CAM text length (*Ln\_#words*) depending on litigation risk, financial reporting quality and the interaction between the two. The results from the OLS regression analysis are reported in Table 7. In column 1, I estimate the

baseline model without the interaction term, and the coefficient on *Litigation* is negative (-0.0581,  $p < 0.10$ ). In columns 2, 3, and 4, I add the interaction term and use the text length of CAM, Description, and Response, respectively, as the dependent variable. The results from these tests, show that only the coefficient on *Abs\_DA*, in column 4, is positive and significant (0.6287,  $p < 0.10$ ). The evidence from this analysis seems inconsistent and I refrain from making any inferences for the association between my variables of interest and the text length in CAM disclosures.

In conclusion, the overall results from the main analyses suggest that auditor litigation risk is an important factor in determining CAM disclosures. Specifically, when litigation risk is higher auditors disclose more CAMs and are more likely to use specific (less boilerplate) language in CAM disclosures. However, in presence of high litigation risk, when clients present low financial reporting quality, auditors are more likely to disclose CAMs that are less readable, especially in the Response component, and contain more boilerplate language.

#### ***CAM Disclosures and Audit Effort***

To test my last set of hypotheses (H4a and H4b), I estimate OLS regression model 2 where the dependent variable is either the natural log of audit fees (*Ln\_AFees*) or the natural log of the number of days between client fiscal year-end date and auditor signature date (*Ln\_Replag*). Table 8 reports the results from the tests when the independent variable of interest is the number of CAMs. In column 1, as expected, the coefficient on the number of CAMs is positive and significant (0.0880,  $p < 0.01$ ) suggesting a positive association between audit fees and number of CAMs in the audit report. This implies that an additional CAM, on average, increases by 9 percent the audit fees. Also, in column 2, when the

dependent variable is audit report delay (*Ln\_Replag*) the coefficient on the number of CAMs is positive and significant (0.0123,  $p < 0.05$ ). This implies that an additional CAM, on average, increases about 1.23 percent the audit report lag. Altogether, these results suggest that as the number of CAMs in audit report increases, audit fees and report delay increase as well, providing support for H4a.

Further, the coefficients on control variables and an R-squared of about 80 percent are largely consistent with prior audit fees literature (e.g., DeFond and Zhang, 2014). Specifically, the big four audit firms and audit offices that are industry leaders charge higher audit fees as suggested by coefficients on *Big4* (0.2797,  $p < 0.01$ ) and *IndSpecial* (0.0841,  $p < 0.01$ ). Furthermore, larger (*Size*) and more complex client firms (*Complexity*, *Receivables*), and clients undergoing restructuring events (*Restruct*) and with more material weaknesses (*Countweak*) pay higher audit fees as suggested by the significantly positive respective coefficients.

Table 9 shows the results when the independent variable is readability (*Read\_Bog*). The unit of analysis is the CAM disclosure or one of its components: Description and Response. The coefficients reported in columns 1-6 do not support an association between the readability of CAM, Description, or Response and audit fees (*Ln\_AFees*) or audit report delay (*Ln\_Replag*).

Next, I examine how audit fees and audit report delay vary with the use of boilerplate language and report the results in Table 10. When the dependent variable is *Ln\_AFees* (column 1), the coefficient on *Boilerplate* is positive and significant (0.0043,  $p < 0.01$ ) suggesting a positive association between audit fees and the use of boilerplate (standardized) language. However, in column 2, the coefficient on *Boilerplate* is

insignificant and the results do not support an association between the audit report delay and the use of boilerplate language in CAM disclosures.

Table 11 shows the results from the OLS regressions where the dependent variable is either audit fees (*Ln\_AFees*) or report delay (*Ln\_Replag*) and the independent variable is the text length in each CAM or in one of its components, Description and Response. The results in Columns 1-3 do not support any association between audit fees and the text length in disclosure. In Column 4, the coefficient on *Ln\_words* is positive and significant (0.0274,  $p < 0.05$ ) suggesting that lengthier CAM disclosures imply significantly more days for the audit report to be completed. When examining separately each CAM component, the results show that this association is driven by the length of the Response (column 6) and not the Description (column 5) component, suggesting that lengthier CAM disclosures are positively associated with audit report delay and this association is true only for longer Response components.

Overall, while both audit fees and audit report delay are positively associated with the number of CAMs disclosed in the audit report, the tests using textual attributes of disclosures do not provide strong evidence for significant associations. Therefore, I conclude that audit costs and effort are positively associated with the number of CAMs and I refrain from making inferences about the textual quality of CAM disclosures. The results for the number of CAMs are consistent with cross-sectional analysis in similar studies (Gutierrez et al., 2018; Burke et al. 2020). The lack of systematic support for textual attributes also follows the pattern of inconclusive evidence reported in prior research (e.g., Liao et al., 2019; Chen et al., 2020).

## **Robustness Tests and Additional Analyses**

### ***Number of CAMs***

In my last section of this chapter, I perform a series of robustness and additional tests in order to corroborate the findings from the main analyses. I use alternative litigation measures, alternative specifications to model 1, and alternative regression methods for the association between number of CAMs and litigation risk, financial reporting quality, and their interaction. Table 12 shows the results from these tests.

In Columns 1 and 2, I consider two alternative measures for litigation risk. Although the main litigation risk measure in this study is widely used in accounting research (e.g., Francis et al., 1994; Matsumoto, 2002; Brown and Tucker, 2011; Donelson et al., 2012; Cassell et al., 2013), one of the limitations is that it is not a client- or auditor-specific measure. Since the construct of interest is auditor's ex-ante perception of litigation risk, this perception may also be formed based on the specific client's or audit firm's litigation history. Hence, I develop a client-specific measure based on the frequency at which client firms are involved as defendants in class action lawsuits over the past ten years (*Lawsuit\_CL*) and an audit-specific measure based on the frequency at which audit firms are involved as defendants in lawsuits related to securities over the past ten years (*Lawsuit\_AU*). Consistent with the main results, the coefficient on *Lawsuit\_CL* (column 1) and the coefficient on *Lawsuit\_AU* (column 2) are both positive and significant (0.0206,  $p < 0.01$ ; 0.0049,  $p < 0.01$ ) supporting a positive association between litigation risk and number of CAMs in the audit report. Also, the coefficient on *Abs\_DA* is positive and significant across these tests (1.1427,  $p < 0.01$ ; 1.6219,  $p < 0.01$ ) suggesting a negative association between financial reporting quality and the number of CAMs in the audit



report.

I continue the analysis in Column 3 with exploring an alternative specification of model 1. First, although the CAM disclosure requirements were adopted in June 2017, audit firms and their clients were allowed a period of preparation until the effective date of June 30, 2019. I explore the possibility that clients switched to more lenient auditors in order to obtain more favorable audit opinions containing less fewer CAMs. Such opportunistic switches can imply that auditor independence has been somewhat impaired. Therefore, I estimate an alternative specification to model 1 where I replace auditor tenure with a measure for auditor change (*Au\_change*) and a proxy for auditor independence (*Au\_indep*). If the relation between auditor and client is one or two years long then *Au\_change* is equal to one, and zero otherwise. The variable *Au\_indep* is based on the literature that uses the ratio between non-audit service fees and audit fees to proxy auditor independence (e.g., Burke et al, 2020). Consistent with the results from main analysis, column 2 shows that number of CAMs is positively associated with litigation risk and negatively associated with financial reporting quality. The results do not suggest any confounding effects from opportunistic switches. Next, I consider the possibility that there might be other auditor characteristics not captured by the set of control variables and expand model 1 to include audit firm fixed effects. Since this implies that standard errors may also vary at the audit firm, I estimate robust standard errors clustered at the audit firm (Cameron and Miller, 2015). The results in column 5 show that the coefficient on *Litigation* is positive and significant (0.1692,  $p < 0.01$ ), the coefficient on *Abs\_DA* is positive and significant (1.1329,  $p < 0.05$ ), and the coefficient on the interaction term remains insignificant.

In my last two tests, I use alternative regression methods. First, as mentioned above, all clients receive at least one CAM consistent with the expectation mentioned in the AS 3101. This might imply that this expectation has made auditors lower the threshold for issuing a CAM. Therefore, I run a logit regression analysis of Model 1 where the dependent variable is *CAMs\_dummy* which equals one if the auditor issues more than one CAM to the specific client, and zero otherwise. Second, since Model 1 includes fixed effects, I check the robustness of the results by estimating an OLS regression where the dependent variable is *Ln\_nrCAMs* determined as the logarithm of the number of CAMs in the audit report. The results of these tests are reported in Columns 5 and 6, respectively. Consistent with the results from previous tests, the coefficient on *Litigation* is positive and significant in both columns. The coefficient on *Abs\_DA* is also positive and significant. However, the coefficient on the interaction term is not significant. In conclusion, the overall results from these additional tests are consistent with the results from the main analyses and provide strong support to H1a and H2a.

### ***CAM Disclosure Readability***

In Table 13, I report the results from additional analyses on the variation of CAM disclosure readability. In Panel A, Columns 1-3, I estimate model 1 including audit firm fixed effects and clustering the robust standard errors at both the audit and client level. In addition, in Columns 3-6, I use an alternative measure of litigation risk based on client's litigation history. The results continue to show that, when litigation risk is high, clients with lower financial reporting quality have less readable disclosures and the lower readability is manifested in the Response rather than Description component.

In Panel B, I use an alternative measure for disclosure readability. Although the

Bog index has all the desired features to better capture the intended construct of readability, it is a recent measure. Prior accounting textual analysis literature has largely relied on the Gunning's Fog index which measures the education level required to understand a text (e.g., Li, 2008; Lo et al. 2017). The alternative measure in this study is constructed using *StyleWriter* software which determines the reading grade of a document similar to the Gunning's Fog index formula (see Appendix A). Although the Fog index faces criticisms because it is based simply on the number of words and word syllables (Loughran and McDonald, 2014), to be comparable with this literature, this study uses *Read\_Grade\_Fog* as an alternative readability measure.

The results reported in Panel B of Table 13 are consistent with the above results on readability and the inferences remain unchanged. In conclusion, in presence of high litigation risk, CAMs become less readable and understandable when the quality of financial reporting is low.

### ***CAM Disclosure Boilerplate***

My last additional analysis is focused on the variation in CAM disclosure boilerplate. Recall that the PCAOB requires that CAM disclosures be tailored to the specifics of audit engagement. Hence, I estimate the extent of variation in CAM language similarity depending on client characteristic similarities and whether CAM-pairs have been prepared by the same audit firm, same audit office, or same individual audit partner. To perform an analysis of this scale, the pairwise variable *Similarity\_score* is used to create a matrix variable where each row and each column corresponds to a unique CAM identifier, and each element of the matrix corresponds to the value of *Similarity\_score* between each corresponding CAM-pair, and zero if missing. Hence, the resulting matrix variable has

4,820,220 elements.<sup>24</sup> For this test, I employ the Quadratic Assignment Procedure (QAP regression) that accommodates data structured as matrices (Krackhardt, 1988). Since the dependent variable is a matrix, each independent variable in model 1 is transformed in matrices to capture similarities across those dimensions, using the routine Attribute-to-Matrix in *Ucinet* software (Borgatti et al., 2002). Appendix E explains the method and the procedure in more detail.

The results from QAP regressions are reported in Table 14. Specifically, the standardized coefficients in column 1 suggest that similarities at the client level, like litigation risk (*SimilarLitigRisk*), financial reporting quality (*similarAbs\_DA*), and their interaction (*SimilarLitigRisk x Abs\_DA*) are important factors in explaining the extent of boilerplate. Other significant factors include whether the audit firm is from the Big4 group (*SimilarBig4*) and whether the clients are from the same industry (*SameSic2*). In column 2, I add the shared audit firm variable (*SameAuFirm*) and the coefficient suggest a large effect of audit firm on *Similarity\_score*. The R-squared is also improved significantly, 41.6 percent from 0.8 percent, suggesting a strong contribution of audit firms in explaining the similarity in CAM language. To further investigate to what extent the disclosure language is tailored at the audit office and audit partner level, I include variables for same audit office (*SameAuOffice*) and same audit partner (*SameAuPartner*).

The results in column 3 show that sharing the same audit partner or even the same audit office also affects the similarity of disclosures. However, the coefficient on *SameAuFirm* remains robust and of larger magnitude relative to coefficients on

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<sup>24</sup> The value corresponds to 2,196 CAMs representing the observations with non-missing variables from the test of model 1 reported in Table 6.

*SameAuPartner* and *SameAuOffice*. Also, the R-squared marginally improved (41.7 percent from 41.6 percent) relative to the specification in Column 2, suggesting a weak explanatory power of audit partner and audit office in the variation of CAM language similarity. Overall, these results suggest that CAM disclosures are largely determined at the audit firm rather than audit engagement level casting doubts as to whether the standard has achieved the objective of eliminating/minimizing boilerplate language in audit reports.

**TABLE 1. Critical Audit Matters by Topic for Full Sample**

<b>CAM Topic</b>	<b># of CAMs</b>	<b>CAM Bog</b>
Accounts/loans receivable	37	113.57
Allowance for credit losses	198	122.68
Asset retirement and environmental obligations	45	124.52
Balance sheet classification of assets	1	102.00
Business combinations	405	117.29
Consolidation	13	138.38
Deferred and capitalized costs	96	119.23
Deferred and stock-based compensation	14	104.58
Deferred income taxes	90	119.59
Depreciation and amortization	25	109.53
Derivatives and hedging	10	116.40
Discontinued operations	8	121.51
Disposals and divestitures	6	108.80
Equity investments and joint ventures	51	115.37
Foreign currency translation	1	128.00
Fresh start accounting	1	104.00
Going concern	4	119.00
Goodwill	345	101.27
Goodwill and intangible assets	49	106.95
Insurance contract liabilities	71	114.03
Interest revenue	6	131.98
Internal controls	10	136.20
Inventory	90	108.82
Leases	30	111.67
Long-lived assets	4	108.67
Long-term investments	4	108.99
Other assets	9	122.37
Other contingent liabilities	180	116.72
Other debt	43	120.90

**TABLE 1 (continued)**

Other expenses	6	111.60
Other income taxes	88	110.24
Other intangible assets	87	110.71
Other investments	100	117.84
Other liabilities and provisions	14	111.92
Other revenue	43	108.65
Pension and other post-employment benefits	41	106.17
Policy changes	82	116.25
Property, plant and equipment	138	108.51
Proven and unproven reserves	47	104.27
Related party transactions	14	121.17
Research and development expenses	28	111.67
Revenue from customer contracts	352	113.27
Sales return and allowances	78	105.80
Selling, general and administrative expenses	2	128.00
Shareholder valuation	3	110.50
Subsidiary/affiliate	5	110.34
Uncertain tax positions	110	101.71
Vendor/supplier rebates	6	121.00
Warranty liabilities	34	103.06
<b>TOTAL</b>	<b>3,124</b>	

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**TABLE 2. Descriptive Statistics**

<b>Panel A. Client Firm Level</b>								
	<b>N</b>	<b>Mean</b>	<b>St. Dev.</b>	<b>Min</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>Max</b>
<i>nrCAMs</i>	1,896	1.65	0.80	1	1	1	2	5
<i>Litigation</i>	1,896	0.24	0.43	0	0	0	0	1
<i>Abs_da</i>	1,559	0.04	0.05	0.00	0.01	0.03	0.05	0.41
<i>Ln_AFees</i>	1,884	14.89	0.98	12.21	14.20	14.76	15.50	18.16
<i>Ln_Replag</i>	1,896	3.972	0.16	2.64	3.91	4.03	4.06	5.15
<i>Big4</i>	1,896	0.903	0.30	0	1	1	1	1
<i>Tenure</i>	1,893	2.723	0.84	0.69	2.08	2.83	3.26	4.88
<i>IndSpecial</i>	1,336	0.632	0.48	0	0	1	1	1
<i>Busy</i>	1,896	0.878	0.33	0	1	1	1	1
<i>ARC</i>	1,336	438	153.33	99	331	411	520	1263
<i>Size</i>	1,896	8.644	1.65	4.16	7.50	8.52	9.62	15.07
<i>Countweak</i>	1,896	0.063	0.44	0	0	0	0	6
<i>Complexity</i>	1,726	0.818	0.72	0	0	1.10	1.39	3.22
<i>Age</i>	1,895	3.108	0.73	1.10	2.56	3.22	3.58	4.25
<i>Restruct</i>	1,896	0.390	0.49	0	0	0	1	1
<i>Cfo</i>	1,896	0.064	0.12	-1.10	0.03	0.07	0.11	0.57
<i>Inventory</i>	1,882	0.165	0.20	0	0.04	0.10	0.18	0.82
<i>Receivables</i>	1,854	0.055	0.09	0	0	0.01	0.09	0.49
<i>Loss</i>	1,896	0.194	0.40	0	0	0	0	1
<i>Mtb</i>	1,889	2.269	1.89	0.74	1.10	1.54	2.61	10.57
<i>Roa</i>	1,896	0.019	0.12	-0.62	0.01	0.03	0.07	0.28
<i>Exter_fin</i>	1,896	0.259	0.44	0	0	0	1	1
<i>Zscore</i>	1,565	3.431	4.03	-1.82	1.24	2.38	3.94	28.50
<i>Leverage</i>	1,891	0.325	0.22	0	0.14	0.32	0.46	1.00

<b>Panel B. Textual Analysis Variables at the CAM Level</b>								
	<b>N</b>	<b>Mean</b>	<b>St.Dev.</b>	<b>Min</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>Max</b>
<i>Cam_Bog</i>	3,124	114.06	20.88	56	100	113	126	238
<i>Descr_Bog</i>	3,124	113.94	24.14	27	99	112	127	365
<i>Resp_Bog</i>	3,124	112.59	36.54	0	92	110	129	576
<i>Cam_#words</i>	3,124	360.42	116.30	122	279	341	423	1109
<i>Descr_#words</i>	3,124	177.28	80.03	22	121	161	218	740
<i>Resp_#words</i>	3,124	142.78	62.59	0	101	140	178	696
<i>Boilerplate</i>	2,196	15.59	9.98	0.08	8	13	21	46

<b>Panel C. Textual Analysis Variable at the CAM-Pair Level</b>					
	<b>N</b>	<b>Mean</b>	<b>St.Dev.</b>	<b>Min</b>	<b>Max</b>
<i>Similarity_score</i>	801,294	47.57	36.00	20	517



TABLE 3. Correlation Coefficients

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	
1 <i>nrCAMs</i>	1																														
2 <i>Read_bog(CAM)</i>	-0.02	1																													
3 <i>Read_bog(Descr)</i>	<b>-0.04</b>	<b>0.74</b>	1																												
4 <i>Read_bog(Resp)</i>	0.01	<b>0.79</b>	<b>0.38</b>	1																											
5 <i>Boilerplate</i>	-0.06	<b>-0.29</b>	<b>-0.25</b>	<b>-0.26</b>	1																										
6 <i>Ln_words(CAM)</i>	<b>-0.07</b>	<b>-0.24</b>	<b>-0.28</b>	<b>-0.23</b>	<b>0.77</b>	1																									
7 <i>Ln_words(Descr)</i>	-0.03	<b>-0.09</b>	<b>-0.10</b>	<b>-0.18</b>	<b>0.68</b>	<b>0.21</b>	1																								
8 <i>Ln_words(Resp)</i>	-0.01	<b>-0.21</b>	-0.04	<b>-0.28</b>	<b>0.31</b>	<b>0.31</b>	<b>0.12</b>	1																							
9 <i>Litigation</i>	0.01	<b>0.06</b>	0.04	<b>0.05</b>	<b>-0.11</b>	<b>-0.08</b>	<b>-0.09</b>	<b>-0.06</b>	1																						
10 <i>Abs_DA</i>	0.01	-0.03	-0.01	-0.03	-0.02	-0.03	-0.00	<b>-0.04</b>	<b>0.05</b>	1																					
11 <i>Ln_AFees</i>	<b>0.40</b>	<b>-0.04</b>	-0.03	0.00	<b>0.09</b>	<b>0.04</b>	<b>0.04</b>	<b>0.12</b>	<b>-0.08</b>	<b>0.08</b>	1																				
12 <i>Ln_Replag</i>	0.01	0.01	-0.01	0.00	0.01	-0.01	<b>0.04</b>	-0.01	-0.02	<b>-0.09</b>	<b>-0.16</b>	1																			
13 <i>Big4</i>	0.03	<b>0.09</b>	<b>0.05</b>	<b>0.14</b>	<b>0.06</b>	-0.03	0.04	<b>0.12</b>	<b>0.05</b>	<b>0.05</b>	<b>0.31</b>	<b>-0.06</b>	1																		
14 <i>IndSpecial</i>	<b>-0.04</b>	0.03	0.03	-0.01	0.01	0.00	<b>0.06</b>	0.02	-0.02	0.00	<b>0.11</b>	-0.03	<b>0.14</b>	1																	
15 <i>Tenure</i>	0.03	-0.02	0.00	-0.02	<b>0.07</b>	<b>0.06</b>	0.03	<b>0.11</b>	<b>-0.11</b>	<b>0.12</b>	<b>0.30</b>	<b>-0.13</b>	<b>0.14</b>	<b>0.18</b>	1																
16 <i>Busy</i>	-0.03	-0.03	-0.01	-0.03	0.00	0.01	-0.03	-0.03	<b>-0.08</b>	<b>0.09</b>	<b>-0.04</b>	-0.02	-0.02	-0.02	<b>-0.08</b>	1															
17 <i>Ln_ARC</i>	<b>0.39</b>	<b>-0.15</b>	<b>-0.14</b>	<b>-0.10</b>	<b>0.16</b>	<b>0.14</b>	<b>0.09</b>	<b>0.10</b>	<b>-0.30</b>	<b>0.12</b>	<b>0.59</b>	0.01	<b>0.06</b>	-0.03	<b>0.16</b>	<b>0.07</b>	1														
18 <i>Size</i>	<b>0.35</b>	<b>-0.12</b>	<b>-0.09</b>	<b>-0.09</b>	<b>0.12</b>	<b>0.09</b>	<b>0.05</b>	0.03	<b>-0.25</b>	<b>0.14</b>	<b>0.76</b>	<b>-0.20</b>	<b>0.15</b>	<b>0.06</b>	<b>0.26</b>	<b>0.07</b>	<b>0.68</b>	1													
19 <i>Countweak</i>	<b>0.06</b>	0.01	-0.02	0.04	-0.03	-0.01	-0.04	-0.01	0.00	-0.01	<b>0.04</b>	0.22	0.00	0.03	<b>-0.06</b>	<b>-0.10</b>	-0.01	-0.03	1												
20 <i>Complexity</i>	<b>0.23</b>	0.00	-0.02	0.01	<b>0.10</b>	<b>0.07</b>	<b>0.08</b>	<b>0.11</b>	<b>-0.31</b>	<b>0.10</b>	<b>0.45</b>	<b>-0.06</b>	<b>0.08</b>	<b>0.10</b>	<b>0.23</b>	<b>-0.09</b>	<b>0.52</b>	<b>0.41</b>	-0.02	1											
21 <i>Age</i>	<b>0.10</b>	0.01	0.00	0.01	<b>0.09</b>	<b>0.07</b>	<b>0.05</b>	<b>0.05</b>	<b>-0.24</b>	<b>0.16</b>	<b>0.31</b>	<b>-0.16</b>	0.03	<b>0.10</b>	<b>0.52</b>	<b>-0.07</b>	<b>0.28</b>	<b>0.33</b>	<b>-0.09</b>	<b>0.37</b>	1										
22 <i>Restruct</i>	<b>0.14</b>	<b>0.05</b>	<b>0.06</b>	0.03	<b>0.04</b>	0.02	0.03	<b>0.19</b>	0.03	<b>0.05</b>	<b>0.26</b>	<b>-0.08</b>	<b>0.09</b>	-0.01	<b>0.10</b>	<b>-0.11</b>	<b>0.15</b>	<b>0.05</b>	0.03	<b>0.12</b>	<b>0.11</b>	1									
23 <i>Cfo</i>	-0.03	<b>0.10</b>	<b>0.07</b>	<b>0.10</b>	-0.03	<b>-0.04</b>	-0.01	<b>0.04</b>	<b>-0.07</b>	<b>0.08</b>	<b>0.06</b>	<b>-0.13</b>	0.03	-0.02	<b>0.14</b>	<b>-0.11</b>	<b>-0.04</b>	0.03	0.01	<b>0.08</b>	<b>0.19</b>	<b>0.10</b>	1								
24 <i>Receivables</i>	<b>-0.05</b>	-0.01	0.00	-0.01	0.02	0.02	0.00	-0.03	<b>-0.10</b>	<b>-0.10</b>	<b>0.11</b>	0.04	-0.01	-0.03	<b>0.09</b>	<b>-0.06</b>	0.02	0.02	0.01	0.04	<b>0.08</b>	<b>0.07</b>	<b>0.07</b>	1							
25 <i>Inventory</i>	<b>-0.05</b>	<b>0.05</b>	0.04	0.03	-0.03	<b>-0.05</b>	0.02	0.01	<b>-0.12</b>	-0.03	0.01	-0.01	0.00	<b>0.04</b>	<b>0.09</b>	<b>-0.19</b>	<b>-0.05</b>	<b>-0.06</b>	<b>0.07</b>	<b>0.10</b>	<b>0.14</b>	<b>0.10</b>	0.02	<b>0.08</b>	1						
26 <i>Loss</i>	0.02	<b>0.04</b>	<b>0.04</b>	0.01	0.00	0.01	0.01	0.01	<b>0.21</b>	<b>-0.11</b>	<b>-0.09</b>	<b>0.04</b>	0.00	0.02	<b>-0.14</b>	<b>0.05</b>	<b>-0.15</b>	<b>-0.21</b>	0.03	<b>-0.16</b>	<b>-0.23</b>	<b>0.05</b>	<b>-0.34</b>	<b>-0.12</b>	<b>-0.08</b>	1					
27 <i>Mtb</i>	<b>-0.18</b>	0.00	0.03	-0.01	<b>-0.13</b>	<b>-0.09</b>	<b>-0.12</b>	<b>-0.07</b>	<b>0.33</b>	<b>-0.16</b>	<b>-0.29</b>	<b>-0.07</b>	<b>-0.07</b>	-0.04	<b>-0.12</b>	<b>-0.04</b>	<b>-0.43</b>	<b>-0.39</b>	-0.02	<b>-0.33</b>	<b>-0.21</b>	<b>-0.19</b>	<b>0.05</b>	-0.02	<b>-0.07</b>	<b>0.06</b>	1				
28 <i>Roa</i>	-0.03	0.03	0.01	<b>0.05</b>	-0.04	-0.03	-0.03	0.01	<b>-0.17</b>	<b>0.07</b>	<b>0.13</b>	<b>-0.11</b>	0.04	0.01	<b>0.17</b>	<b>-0.09</b>	<b>0.11</b>	<b>0.17</b>	0.00	<b>0.15</b>	<b>0.26</b>	0.02	<b>0.75</b>	<b>0.11</b>	<b>0.11</b>	<b>-0.66</b>	0.03	1			
29 <i>Exter_fin</i>	<b>-0.08</b>	0.00	0.01	0.00	0.02	0.03	-0.01	-0.04	<b>0.10</b>	-0.04	0.01	-0.02	-0.03	<b>0.06</b>	0.01	<b>-0.06</b>	<b>-0.07</b>	-0.03	0.00	<b>-0.11</b>	0.01	<b>-0.06</b>	<b>-0.06</b>	0.03	0.01	0.00	<b>0.16</b>	-0.01	1		
30 <i>Zscore</i>	<b>-0.20</b>	0.02	0.01	0.02	<b>-0.14</b>	<b>-0.07</b>	<b>-0.13</b>	<b>-0.05</b>	<b>0.19</b>	<b>-0.05</b>	<b>-0.29</b>	<b>-0.05</b>	<b>-0.09</b>	-0.01	<b>-0.05</b>	<b>-0.12</b>	<b>-0.44</b>	<b>-0.34</b>	0.00	<b>-0.22</b>	<b>-0.06</b>	<b>-0.17</b>	<b>0.25</b>	0.04	<b>0.09</b>	<b>-0.12</b>	<b>0.66</b>	<b>0.30</b>	<b>0.14</b>	1	
31 <i>Leverage</i>	0.03	0.01	0.02	0.03	0.03	-0.01	0.04	0.03	<b>-0.06</b>	0.02	<b>0.07</b>	-0.02	0.08	<b>0.06</b>	-0.04	<b>0.10</b>	<b>0.15</b>	<b>0.09</b>	0.00	<b>0.06</b>	-0.01	<b>0.09</b>	-0.02	<b>-0.14</b>	<b>-0.05</b>	0.04	<b>-0.07</b>	<b>-0.05</b>	<b>-0.12</b>	<b>-0.42</b>	1

Note: This table shows Pearson correlation coefficients between all variables for the whole sample. Bold represent significance at the 5% level or better.

**TABLE 4. Litigation risk, Financial Reporting Quality, and Number of CAMs**

<i>Variables</i>	<i>Pred.</i>	(1)	(2)
		<i>nrCAMs</i>	
		<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )
<i>Litigation</i>	+	<b>0.1537***</b> ( <b>0.003</b> )	<b>0.1891***</b> ( <b>0.001</b> )
<i>Abs_DA</i>	-	<b>0.9392***</b> ( <b>0.002</b> )	<b>1.2408***</b> ( <b>0.001</b> )
<i>Litigation x Abs_DA</i>	-		-0.8566 (0.193)
<i>Tenure</i>		0.0026 (0.866)	0.0029 (0.851)
<i>Big4</i>		-0.1187** (0.013)	-0.1194** (0.012)
<i>IndSpecial</i>		-0.0036 (0.890)	-0.0025 (0.923)
<i>Busy</i>		-0.0508 (0.141)	-0.0509 (0.138)
<i>Ln_ARC</i>		0.3576*** (0.000)	0.3619*** (0.000)
<i>Size</i>		0.0542*** (0.000)	0.0542*** (0.000)
<i>Countweak</i>		0.0502 (0.124)	0.0521 (0.117)
<i>Mtb</i>		-0.0099 (0.171)	-0.0085 (0.246)
<i>Roa</i>		-0.1021 (0.494)	-0.1101 (0.458)
<i>Leverage</i>		-0.0353 (0.568)	-0.0322 (0.603)
<i>Loss</i>		0.0559 (0.158)	0.0559 (0.157)
<i>Exter_fin</i>		-0.0240 (0.368)	-0.0256 (0.339)
<i>Restruct</i>		0.0439* (0.093)	0.0433* (0.096)
<i>Complexity</i>		0.0033 (0.872)	0.0048 (0.818)
<i>Inventory</i>		-0.1200 (0.490)	-0.1096 (0.528)
<i>Receivables</i>		-0.1396 (0.258)	-0.1387 (0.262)
Ind F.E.		Yes	Yes
Intercept		Yes	Yes

**TABLE 4. (continued)**

Obs.	1,336	1,336
Pseudo R2	0.0294	0.0295

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This table shows the results from negative binomial regression analysis where the dependent variable is the number of CAMs in the audit report (*nrCAMs*). See Appendix C for all variable definitions. Column 1 (2) presents the results from the main test without (with) the interaction term. Bold indicates results corresponding to hypothesized relationship. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests. The coefficients are estimated using heteroskedasticity robust standard errors.

**TABLE 5. Litigation risk, Financial Reporting Quality, and CAM Readability**

<i>Variables</i>	(1)	(2)	(3)	(4)
	<i>Read_Bog</i>			
	CAM <i>Coef. Est.</i> ( <i>p-val</i> )	CAM <i>Coef. Est.</i> ( <i>p-val</i> )	Description <i>Coef. Est.</i> ( <i>p-val</i> )	Response <i>Coef. Est.</i> ( <i>p-val</i> )
<i>Litigation</i>	-0.0084 (0.683)	0.0178 (0.433)	-0.0232 (0.341)	0.0294 (0.381)
<i>Abs_DA</i>	-0.1291 (0.279)	0.1011 (0.489)	-0.0115 (0.939)	0.1805 (0.410)
<i>Litigation x Abs_DA</i>		<b>-0.6406***</b> ( <b>0.008</b> )	-0.2368 (0.383)	<b>-0.9816***</b> ( <b>0.004</b> )
<i>Tenure</i>	-0.0041 (0.482)	-0.0038 (0.506)	0.0009 (0.879)	-0.0111 (0.174)
<i>Big4</i>	0.0525*** (0.001)	0.0526*** (0.001)	0.0235 (0.217)	0.0818*** (0.000)
<i>IndSpecial</i>	-0.0028 (0.767)	-0.0022 (0.818)	0.0016 (0.876)	-0.0077 (0.587)
<i>Busy</i>	0.0037 (0.763)	0.0045 (0.721)	0.0053 (0.676)	-0.0035 (0.844)
<i>Ln_ARC</i>	-0.0643*** (0.001)	-0.0602*** (0.002)	-0.0904*** (0.000)	-0.0361 (0.198)
<i>Size</i>	-0.0002 (0.950)	-0.0003 (0.934)	0.0033 (0.435)	-0.0062 (0.282)
<i>Countweak</i>	-0.0017 (0.881)	0.0002 (0.986)	-0.0115 (0.394)	0.0114 (0.474)
<i>Mtb</i>	-0.0029 (0.251)	-0.0016 (0.535)	0.0021 (0.488)	-0.0040 (0.360)
<i>Roa</i>	0.0934* (0.076)	0.0856 (0.106)	0.0434 (0.453)	0.1361* (0.059)
<i>Leverage</i>	0.0330 (0.178)	0.0363 (0.138)	0.0408 (0.150)	0.0656** (0.049)
<i>Loss</i>	0.0116 (0.457)	0.0111 (0.478)	0.0183 (0.277)	-0.0084 (0.705)
<i>Exter_fin</i>	-0.0029 (0.779)	-0.0030 (0.771)	0.0061 (0.602)	-0.0023 (0.882)
<i>Restruct</i>	-0.0108 (0.273)	-0.0112 (0.251)	0.0089 (0.399)	-0.0229 (0.116)
<i>Complexity</i>	0.0083 (0.281)	0.0092 (0.231)	0.0074 (0.369)	0.0107 (0.353)
<i>Inventory</i>	0.1108* (0.090)	0.1175* (0.070)	0.0660 (0.355)	0.1773 (0.100)
<i>Receivables</i>	-0.0138 (0.765)	-0.0098 (0.833)	-0.0093 (0.854)	-0.0205 (0.764)
Ind F.E.	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes

**TABLE 5. (continued)**

Obs.	2,196	2,196	2,196	2,196
R-squared	0.105	0.109	0.077	0.087

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This table shows the results from OLS regressions, at the CAM level, where the dependent variable is CAM readability. For ease of interpretation, the natural log of *Bog* is multiplied by -1 so that higher values of *Read\_Bog* indicate higher readability. See Appendix C for all variable definitions. Column 1 & 2 (3, 4) reports results for CAM (Description, Response) readability. The coefficients are estimated using heteroskedasticity robust standard errors clustered at the client firm level. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests.

**TABLE 6. Litigation risk, Financial Reporting Quality, and CAM Boilerplate Language**

<i>Variables</i>	(1)	(2)
	<i>Ln(Boilerplate)</i>	
	<i>Coef. Est.</i> <i>(p-val)</i>	<i>Coef. Est.</i> <i>(p-val)</i>
<i>Litigation</i>	<b>-0.1800**</b> <b>(0.016)</b>	<b>-0.2544***</b> <b>(0.004)</b>
<i>Abs_DA</i>	-0.0160 (0.975)	-0.6700 (0.302)
<i>Litigation x Abs_DA</i>		<b>1.8205*</b> <b>(0.073)</b>
<i>Tenure</i>	0.0742*** (0.005)	0.0735*** (0.005)
<i>Big4</i>	0.2426*** (0.001)	0.2423*** (0.001)
<i>IndSpecial</i>	-0.0766* (0.068)	-0.0784* (0.062)
<i>Busy</i>	-0.0435 (0.445)	-0.0455 (0.422)
<i>Ln_ARC</i>	0.0629 (0.505)	0.0511 (0.592)
<i>Size</i>	-0.0389** (0.037)	-0.0387** (0.038)
<i>Countweak</i>	-0.0291 (0.574)	-0.0344 (0.518)
<i>Mtb</i>	0.0001 (0.996)	-0.0037 (0.771)
<i>Roa</i>	0.0493 (0.824)	0.0715 (0.747)
<i>Leverage</i>	0.0648 (0.546)	0.0554 (0.604)
<i>Loss</i>	0.0463 (0.515)	0.0480 (0.499)
<i>Exter_fin</i>	-0.0170 (0.732)	-0.0167 (0.736)
<i>Restruct</i>	0.1742*** (0.000)	0.1756*** (0.000)
<i>Complexity</i>	0.1158*** (0.001)	0.1132*** (0.001)
<i>Inventory</i>	-1.2311*** (0.007)	-1.2500*** (0.006)
<i>Receivables</i>	-0.5806** (0.011)	-0.5919*** (0.008)
Ind F.E.	Yes	Yes
Intercept	Yes	Yes

**TABLE 6. (continued)**

Obs.	2,196	2,196
Pseudo R2	0.120	0.121

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This table shows the results from OLS regression analysis when dependent variable is the natural log of *Boilerplate* and the unit of analysis is the individual CAM. See Appendix C for all variable definitions. Column 1 (2) presents the results from the main test without (with) the interaction term. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests. The coefficients are estimated using heteroskedasticity robust standard errors clustered at the client firm level.

**TABLE 7. Litigation Risk, Financial Reporting Quality, and CAM Text Length**

<i>Variables</i>	(1)	(2)	(3)	(4)
	<i>Ln_words</i>			
	CAM <i>Coef. Est.</i> <i>(p-val)</i>	CAM <i>Coef. Est.</i> <i>(p-val)</i>	Description <i>Coef. Est.</i> <i>(p-val)</i>	Response <i>Coef. Est.</i> <i>(p-val)</i>
<i>Litigation</i>	<b>-0.0581*</b> (0.081)	-0.0536 (0.150)	-0.0551 (0.319)	-0.0221 (0.654)
<i>Abs_DA</i>	0.1003 (0.610)	0.1396 (0.555)	-0.1332 (0.695)	<b>0.6287*</b> (0.055)
<i>Litigation x Abs_DA</i>		-0.1094 (0.795)	0.3361 (0.571)	-0.8431 (0.182)
<i>Tenure</i>	0.0162* (0.097)	0.0162* (0.096)	0.0321** (0.023)	0.0077 (0.569)
<i>Big4</i>	0.0459 (0.112)	0.0459 (0.111)	-0.0034 (0.924)	0.0567 (0.176)
<i>IndSpecial</i>	0.0015 (0.928)	0.0016 (0.923)	-0.0018 (0.941)	0.0161 (0.507)
<i>Busy</i>	-0.0189 (0.391)	-0.0188 (0.395)	0.0011 (0.974)	-0.0363 (0.213)
<i>Ln_ARC</i>	0.0696** (0.045)	0.0703** (0.044)	0.1139** (0.027)	0.0443 (0.347)
<i>Size</i>	0.0048 (0.461)	0.0048 (0.462)	-0.0007 (0.939)	0.0101 (0.291)
<i>Countweak</i>	-0.0099 (0.579)	-0.0096 (0.592)	0.0039 (0.853)	-0.0299 (0.377)
<i>Mtb</i>	-0.0076* (0.098)	-0.0073 (0.113)	-0.0056 (0.392)	-0.0104 (0.172)
<i>Roa</i>	-0.2357** (0.013)	-0.2370** (0.013)	-0.1703 (0.231)	-0.3482*** (0.008)
<i>Leverage</i>	0.0047 (0.904)	0.0052 (0.892)	-0.0920 (0.127)	0.0625 (0.274)
<i>Loss</i>	-0.0197 (0.461)	-0.0198 (0.459)	0.0138 (0.729)	-0.0356 (0.303)
<i>Exter_fin</i>	0.0292* (0.095)	0.0292* (0.096)	0.0346 (0.172)	-0.0046 (0.858)
<i>Restruct</i>	0.0103 (0.531)	0.0102 (0.534)	-0.0019 (0.937)	0.0066 (0.776)
<i>Complexity</i>	0.0150 (0.258)	0.0152 (0.254)	0.0082 (0.670)	0.0254 (0.157)
<i>Inventory</i>	-0.3434*** (0.008)	-0.3423*** (0.008)	-0.5252*** (0.001)	-0.1683 (0.316)
<i>Receivables</i>	0.1203 (0.138)	0.1210 (0.135)	0.1907* (0.077)	0.0631 (0.583)



**TABLE 7. (continued)**

Ind F.E.	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Obs.	2,196	2,196	2,196	2,196
R-squared	0.111	0.111	0.086	0.074

This table shows the results from OLS regressions, at the CAM level, where the dependent variable in Column 1 (2, 3) is CAMs (CAMs, Description, Response) textual length measured by the natural log of the number of words (*Ln\_words*). See Appendix C for all variable definitions. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests. The coefficients are estimated using heteroskedasticity robust standard errors clustered at the client firm level.

**TABLE 8. Number of CAMs and Audit Fees and Report Delay**

<i>Variables</i>	<i>Pred.</i>	(1)	(2)
		<i>Ln_AFees</i>	<i>Ln_Replag</i>
		<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> ).
<i>nrCAMs</i>	+	<b>0.0880***</b> <b>(0.000)</b>	<b>0.0123*</b> <b>(0.050)</b>
<i>Big4</i>		0.2797*** (0.000)	0.0233 (0.165)
<i>IndSpecial</i>		0.0841*** (0.003)	-0.0129 (0.211)
<i>Busy</i>		-0.0114 (0.739)	-0.0169 (0.258)
<i>Tenure</i>		0.0196 (0.283)	-0.0012 (0.881)
<i>Size</i>		0.4666*** (0.000)	-0.0349*** (0.000)
<i>Countweak</i>		0.1144*** (0.005)	0.0710*** (0.007)
<i>Complexity</i>		0.1295*** (0.000)	0.0014 (0.855)
<i>Age</i>		-0.0379 (0.114)	-0.0115 (0.206)
<i>Restruct</i>		0.1676*** (0.000)	-0.0229** (0.018)
<i>Cfo</i>		-0.1051 (0.567)	-0.1440*** (0.009)
<i>Receivables</i>		0.5459*** (0.006)	0.0232 (0.614)
<i>Inventory</i>		0.1646 (0.476)	0.0101 (0.898)
<i>Loss</i>		0.0747 (0.122)	-0.0079 (0.577)
<i>Mtb</i>		0.0315*** (0.001)	-0.0165*** (0.000)
<i>Roa</i>		0.1321 (0.573)	0.0431 (0.567)
<i>Exter_fin</i>		0.0166 (0.589)	-0.0103 (0.313)
<i>Zscore</i>		-0.0166*** (0.001)	-0.0014 (0.413)
<i>Litigation</i>		-0.0279 (0.636)	-0.0037 (0.862)
<i>Abs_da</i>		0.2259 (0.602)	0.1211 (0.322)

**TABLE 8. (continued)**

Ind F.E.	Yes	Yes
Intercept	Yes	Yes
Observations	1,241	1,245
R-squared	0.791	0.245

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This table shows the results from OLS regressions where the dependent variable in Column 1 (2) is the natural logarithm of audit fees (audit report lag). See Appendix C for all variable definitions. Bold indicates results corresponding to hypothesized relationships. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tail t-tests. The coefficients are estimated using robust standard errors.

**TABLE 9. CAM Readability and Audit Fees and Report Delay**

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Ln_AFees</i>			<i>Ln_Replag</i>		
	CAM	Description	Response	CAM	Description	Response
<i>Variables</i>	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )
<i>Read_Bog</i>	-0.0570 (0.387)	-0.0703 (0.194)	-0.0170 (0.697)	0.0008 (0.969)	-0.0056 (0.744)	-0.0079 (0.600)
<i>Big4</i>	0.2563*** (0.000)	0.2546*** (0.000)	0.2546*** (0.000)	0.0177 (0.319)	0.0179 (0.311)	0.0185 (0.299)
<i>IndSpecial</i>	0.0819*** (0.008)	0.0826*** (0.008)	0.0817*** (0.009)	-0.0160 (0.146)	-0.0159 (0.148)	-0.0160 (0.146)
<i>Busy</i>	-0.0191 (0.605)	-0.0194 (0.600)	-0.0193 (0.602)	-0.0141 (0.345)	-0.0141 (0.345)	-0.0141 (0.345)
<i>Tenure</i>	0.0245 (0.204)	0.0249 (0.198)	0.0245 (0.204)	0.0006 (0.934)	0.0006 (0.933)	0.0005 (0.947)
<i>Size</i>	0.4790*** (0.000)	0.4789*** (0.000)	0.4792*** (0.000)	-0.0301*** (0.000)	-0.0302*** (0.000)	-0.0302*** (0.000)
<i>Countweak</i>	0.1092** (0.011)	0.1084** (0.012)	0.1094** (0.011)	0.0790*** (0.005)	0.0789*** (0.005)	0.0791*** (0.005)
<i>Complexity</i>	0.1405*** (0.000)	0.1404*** (0.000)	0.1404*** (0.000)	-0.0031 (0.713)	-0.0031 (0.714)	-0.0030 (0.718)
<i>Age</i>	-0.0277 (0.276)	-0.0278 (0.275)	-0.0278 (0.275)	-0.0115 (0.191)	-0.0115 (0.191)	-0.0114 (0.194)
<i>Restruct</i>	0.1671*** (0.000)	0.1680*** (0.000)	0.1677*** (0.000)	-0.0249** (0.017)	-0.0249** (0.017)	-0.0251** (0.016)
<i>Cfo</i>	-0.0331 (0.866)	-0.0294 (0.881)	-0.0350 (0.858)	-0.1212** (0.046)	-0.1208** (0.047)	-0.1211** (0.046)
<i>Receivables</i>	0.6169*** (0.002)	0.6186*** (0.002)	0.6180*** (0.002)	0.0464 (0.359)	0.0463 (0.360)	0.0458 (0.365)
<i>Inventory</i>	0.2636 (0.270)	0.2625 (0.271)	0.2613 (0.274)	0.0358 (0.727)	0.0360 (0.725)	0.0368 (0.719)
<i>Loss</i>	0.0647 (0.207)	0.0652 (0.203)	0.0640 (0.212)	-0.0185 (0.200)	-0.0184 (0.203)	-0.0186 (0.199)
<i>Mtb</i>	0.0386*** (0.000)	0.0391*** (0.000)	0.0387*** (0.000)	-0.0164*** (0.000)	-0.0163*** (0.000)	-0.0164*** (0.000)
<i>Roa</i>	0.0126 (0.957)	0.0090 (0.969)	0.0115 (0.960)	0.0023 (0.977)	0.0023 (0.977)	0.0032 (0.968)
<i>Exter_fin</i>	0.0287 (0.386)	0.0291 (0.378)	0.0289 (0.383)	-0.0136 (0.199)	-0.0136 (0.200)	-0.0137 (0.197)
<i>Zscore</i>	-0.0209*** (0.000)	-0.0210*** (0.000)	-0.0209*** (0.000)	-0.0019 (0.329)	-0.0019 (0.326)	-0.0019 (0.332)
<i>Litigation</i>	-0.0007 (0.991)	-0.0020 (0.972)	-0.0007 (0.991)	0.0133 (0.577)	0.0132 (0.581)	0.0133 (0.578)
<i>Abs_da</i>	0.3112 (0.532)	0.3084 (0.535)	0.3162 (0.525)	0.2283* (0.089)	0.2276* (0.091)	0.2279* (0.090)

**TABLE 9. (continued)**

Ind F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	yes
Obs.	2,053	2,053	2,053	2,062	2,062	2,062
R-squared	0.804	0.804	0.804	0.261	0.261	0.261

This table shows the results from OLS regressions where the dependent variable in Columns 1-3 (4-6) is the natural log of audit fees (audit report lag). See Appendix C for all variable definitions. Columns 1 & 4 (2 & 5; 3 & 6) report the results at the CAM (Description, Response) level, respectively. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tail t-tests. The coefficients are estimated using robust standard errors clustered at the client firm level.

**TABLE 10. CAM Boilerplate Language and Audit Fees and Report Delay**

	(1)	(2)
	<i>Ln_AFees</i>	<i>Ln_Replag</i>
<i>Variables</i>	<i>Coef. Est.</i> <i>(p-val)</i>	<i>Coef. Est.</i> <i>(p-val)</i>
<i>Boilerplate</i>	<b>0.0043***</b> <b>(0.000)</b>	0.0004 (0.350)
<i>Big4</i>	0.2653*** (0.000)	0.0184 (0.305)
<i>IndSpecial</i>	0.0799*** (0.010)	-0.0171 (0.122)
<i>Busy</i>	-0.0159 (0.651)	-0.0126 (0.406)
<i>Tenure</i>	0.0171 (0.370)	0.0007 (0.931)
<i>Size</i>	0.4800*** (0.000)	-0.0299*** (0.000)
<i>Countweak</i>	0.1091** (0.011)	0.0790*** (0.005)
<i>Complexity</i>	0.1333*** (0.000)	-0.0035 (0.674)
<i>Age</i>	-0.0256 (0.310)	-0.0117 (0.187)
<i>Restruct</i>	0.1576*** (0.000)	-0.0265*** (0.010)
<i>Cfo</i>	-0.0966 (0.623)	-0.1213* (0.052)
<i>Receivables</i>	0.6565*** (0.001)	0.0510 (0.319)
<i>Inventory</i>	0.3043 (0.202)	0.0461 (0.653)
<i>Loss</i>	0.0704 (0.167)	-0.0191 (0.191)
<i>Mtb</i>	0.0388*** (0.000)	-0.0159*** (0.000)
<i>Roa</i>	0.0625 (0.787)	0.0053 (0.947)
<i>Exter_fin</i>	0.0342 (0.299)	-0.0140 (0.194)
<i>Zscore</i>	-0.0204*** (0.000)	-0.0019 (0.327)
<i>Litigation</i>	0.0076 (0.893)	0.0159 (0.507)
<i>Abs_da</i>	0.3548 (0.477)	0.2277* (0.091)

**TABLE 10. (continued)**

Ind F.E.	Yes	Yes
Intercept	Yes	Yes
Observations	2,039	2,046
R-squared	0.805	0.260

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This table shows the results from OLS regressions where the dependent variable in Column 1 (2) is the natural logarithm of audit fees (audit report lag). The independent variable *Boilerplate* is the average boilerplate score at the CAM level. See Appendix C for all variable definitions. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tail t-tests. The coefficients are estimated using robust standard errors clustered at the client firm level.

**TABLE 11. CAM Text Length and Audit Fees and Report Delay**

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Ln_AFees</i>			<i>Ln_Replag</i>		
	CAM	Description	Response	CAM	Description	Response
<i>Variables</i>	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )	<i>Coef. Est.</i> ( <i>p-val</i> )
<i>Ln_words</i>	-0.0295 (0.435)	-0.0087 (0.732)	-0.0214 (0.376)	<b>0.0274**</b> <b>(0.039)</b>	0.0013 (0.886)	<b>0.0295***</b> <b>(0.001)</b>
<i>Big4</i>	0.2547*** (0.000)	0.2529*** (0.000)	0.2546*** (0.000)	0.0162 (0.354)	0.0177 (0.314)	0.0156 (0.368)
<i>IndSpecial</i>	0.0817*** (0.009)	0.0817*** (0.009)	0.0819*** (0.008)	-0.0159 (0.147)	-0.0160 (0.147)	-0.0163 (0.135)
<i>Busy</i>	-0.0201 (0.589)	-0.0194 (0.601)	-0.0202 (0.586)	-0.0135 (0.367)	-0.0141 (0.345)	-0.0128 (0.386)
<i>Tenure</i>	0.0251 (0.194)	0.0250 (0.195)	0.0248 (0.198)	0.0004 (0.961)	0.0006 (0.938)	0.0005 (0.944)
<i>Size</i>	0.4796*** (0.000)	0.4794*** (0.000)	0.4796*** (0.000)	-0.0304*** (0.000)	-0.0301*** (0.000)	-0.0304*** (0.000)
<i>Countweak</i>	0.1089** (0.012)	0.1092** (0.012)	0.1084** (0.012)	0.0792*** (0.004)	0.0790*** (0.005)	0.0800*** (0.004)
<i>Complexity</i>	0.1409*** (0.000)	0.1404*** (0.000)	0.1409*** (0.000)	-0.0036 (0.669)	-0.0031 (0.711)	-0.0039 (0.642)
<i>Age</i>	-0.0277 (0.276)	-0.0279 (0.273)	-0.0282 (0.268)	-0.0118 (0.182)	-0.0115 (0.191)	-0.0113 (0.195)
<i>Restruct</i>	0.1684*** (0.000)	0.1681*** (0.000)	0.1679*** (0.000)	-0.0252** (0.016)	-0.0249** (0.017)	-0.0248** (0.017)
<i>Cfo</i>	-0.0302 (0.877)	-0.0347 (0.859)	-0.0307 (0.875)	-0.1259** (0.037)	-0.1213** (0.046)	-0.1271** (0.036)
<i>Receivables</i>	0.6228*** (0.002)	0.6208*** (0.002)	0.6207*** (0.002)	0.0428 (0.397)	0.0461 (0.362)	0.0446 (0.375)
<i>Inventory</i>	0.2487 (0.299)	0.2544 (0.287)	0.2556 (0.286)	0.0454 (0.661)	0.0365 (0.723)	0.0412 (0.686)
<i>Loss</i>	0.0635 (0.215)	0.0644 (0.209)	0.0632 (0.218)	-0.0178 (0.218)	-0.0185 (0.200)	-0.0171 (0.234)
<i>Mtb</i>	0.0386*** (0.000)	0.0387*** (0.000)	0.0386*** (0.000)	-0.0161*** (0.000)	-0.0163*** (0.000)	-0.0160*** (0.000)
<i>Roa</i>	-0.0014 (0.995)	0.0071 (0.975)	-0.0004 (0.999)	0.0126 (0.873)	0.0027 (0.973)	0.0164 (0.834)
<i>Exter_fin</i>	0.0299 (0.366)	0.0292 (0.377)	0.0290 (0.379)	-0.0145 (0.170)	-0.0137 (0.198)	-0.0138 (0.193)
<i>Zscore</i>	-0.0210*** (0.000)	-0.0209*** (0.000)	-0.0211*** (0.000)	-0.0017 (0.361)	-0.0019 (0.329)	-0.0017 (0.391)
<i>Litigation</i>	-0.0024 (0.966)	-0.0010 (0.986)	-0.0019 (0.973)	0.0151 (0.531)	0.0134 (0.576)	0.0153 (0.522)
<i>Abs_da</i>	0.3170 (0.523)	0.3163 (0.525)	0.3204 (0.518)	0.2283* (0.089)	0.2284* (0.089)	0.2234* (0.095)



**TABLE 11. (continued)**

Ind F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	yes
Obs.	2,053	2,053	2,053	2,062	2,062	2,062
R-squared	0.804	0.804	0.804	0.263	0.261	0.267

This table shows the results from OLS regressions where the dependent variable in Columns 1-3 (4-6) is the natural log of audit fees (audit report lag). See Appendix C for all variable definitions. Columns 1 & 4 (2 & 5; 3 & 6) report the results at the CAM (Description, Response) level, respectively. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tail t-tests. The coefficients are estimated using robust standard errors clustered at the client firm level.

**TABLE 12. Additional Analysis on Litigation risk, Financial Reporting Quality, and Number of CAMs in the Audit Report**

	(1)	(2)	(3)	(4)	(5)	(6)
	Alternative <i>Litigation</i> Measure	Alternative <i>Litigation</i> Measure	Alternative Specific.	Alternative Specific.	Alternative Method (Logit)	Alternative Method (OLS)
<i>Variables</i>	<i>nrCAMs</i> <i>Coef. Est.</i> ( <i>p-val</i> )	<i>nrCAMs</i> <i>Coef. Est.</i> ( <i>p-val</i> )	<i>nrCAMs</i> <i>Coef. Est.</i> ( <i>p-val</i> )	<i>nrCAMs</i> <i>Coef. Est.</i> ( <i>p-val</i> )	<i>CAMs_dummy</i> <i>Coef. Est.</i> ( <i>p-val</i> )	<i>Ln_nrCAMs</i> <i>Coef. Est.</i> ( <i>p-val</i> )
<i>Litigation</i>			<b>0.1890***</b> (0.002)	<b>0.1692***</b> (0.007)	<b>0.6153*</b> (0.064)	<b>0.1048***</b> (0.004)
<i>Lawsuit_CL</i>	<b>0.0206***</b> (0.003)					
<i>Lawsuit_AU</i>		<b>0.0049***</b> (0.001)				
<i>Abs_DA</i>	<b>1.1427***</b> (0.001)	<b>1.6219*</b> (0.059)	<b>1.2497***</b> (0.001)	<b>1.1329**</b> (0.040)	<b>6.2180***</b> (0.002)	<b>0.7571***</b> (0.001)
Measure of litigation <i>x Abs_DA</i>	-0.1722 (0.185)	-0.0137 (0.443)	-0.8806 (0.184)	-0.6115 (0.485)	-4.0148 (0.238)	-0.5388 (0.168)
<i>Tenure</i>	-0.0008 (0.959)	-0.0017 (0.911)		0.0038 (0.885)	0.1137 (0.173)	0.0043 (0.643)
<i>Au_change</i>			-0.0176 (0.803)			
<i>Au_indep</i>			-0.0005 (0.885)			
<i>Big4</i>	-0.1043** (0.028)	-0.2557*** (0.000)	-0.1225** (0.011)		-0.5814** (0.022)	-0.0681** (0.020)
<i>IndSpecial</i>	-0.0015 (0.952)	0.0006 (0.982)	-0.0048 (0.854)		0.2222* (0.100)	0.0044 (0.776)
<i>Busy</i>	-0.0585* (0.090)	-0.0580* (0.091)	-0.0487 (0.157)	-0.0514*** (0.002)	-0.2644 (0.148)	-0.0296 (0.157)
<i>Ln_ARC</i>	0.3498*** (0.000)	0.3559*** (0.000)	0.3617*** (0.000)	0.3941*** (0.000)	1.4952*** (0.000)	0.2001*** (0.000)
<i>Size</i>	0.0479*** (0.000)	0.0571*** (0.000)	0.0541*** (0.000)	0.0523*** (0.000)	0.2106*** (0.000)	0.0319*** (0.000)
<i>Countweak</i>	0.0557* (0.098)	0.0516 (0.137)	0.0526 (0.114)	0.0532*** (0.005)	0.2916 (0.108)	0.0314 (0.167)
<i>Mtb</i>	-0.0089 (0.211)	-0.0084 (0.244)	-0.0084 (0.250)	-0.0108 (0.174)	-0.0709* (0.089)	-0.0049 (0.237)
<i>Roa</i>	-0.1429 (0.331)	-0.1526 (0.300)	-0.1013 (0.497)	-0.0751 (0.567)	0.1759 (0.818)	-0.0250 (0.765)
<i>Leverage</i>	-0.0596 (0.338)	-0.0524 (0.404)	-0.0335 (0.589)	-0.0425 (0.333)	0.0941 (0.781)	-0.0157 (0.669)
<i>Loss</i>	0.0550 (0.161)	0.0617 (0.120)	0.0565 (0.155)	0.0597** (0.012)	0.4620** (0.038)	0.0437* (0.077)

**TABLE 12. (continued)**

<i>Exter_fin</i>	-0.0253 (0.341)	-0.0265 (0.320)	-0.0248 (0.358)	-0.0184 (0.383)	-0.0533 (0.721)	-0.0116 (0.473)
<i>Restruct</i>	0.0400 (0.129)	0.0367 (0.160)	0.0439* (0.095)	0.0505* (0.055)	0.3018** (0.034)	0.0273* (0.088)
<i>Complexity</i>	-0.0049 (0.809)	-0.0074 (0.713)	0.0046 (0.823)	0.0042 (0.871)	-0.0370 (0.734)	0.0021 (0.865)
<i>Inventory</i>	-0.2406 (0.172)	-0.1774 (0.307)	-0.1051 (0.546)	-0.0683 (0.681)	-1.0477 (0.294)	-0.0729 (0.486)
<i>Receivables</i>	-0.1773 (0.157)	-0.1464 (0.242)	-0.1402 (0.257)	-0.1069 (0.284)	-0.6184 (0.370)	-0.0820 (0.272)
Ind F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Auditor F.E.	No	No	No	Yes	No	No
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,336	1,336	1,331	1,336	1,310	1,336
Pseudo R2 / R2	0.0293	0.0295	0.0293	0.0341	0.1351	0.216

In this table, Columns 1-4 show the results from negative binomial regression analysis where the dependent variable is the number of CAMs in the audit report (*nrCAMs*). Column 1 (2) reports the results when auditor litigation risk is proxied by the client (audit) firm lawsuit frequency over the last ten years. Column 3 reports the results from the analysis of whether clients opportunistically switch audit firms. Column 4 reports the results from expanding model 1 with audit firm fixed effects and clustering the errors at the audit firm level. In Column 5, the analysis employs a Logit regression method where the dependent variable (*CAMs\_dummy*) equals one if the auditor reports more than just one CAM, and zero otherwise. In Column 6, the analysis employs an OLS regression method and the dependent variable (*Ln\_nrCAMs*) is the natural log of the number of CAMs in the audit report. See Appendix C for all variable definitions. Bold indicates results corresponding to hypothesized relationship. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests. The coefficients are estimated using heteroskedasticity robust standard errors.

**TABLE 13. Additional Analyses on Litigation risk, Financial Reporting Quality, and CAM Disclosure Readability**

<i>Panel A.</i>						
<i>Alternative Litigation measure and model specification</i>	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Read_Bog</i>					
	CAM	Description	Response	CAM	Description	Response
<i>Variables</i>	<i>Coef. Est.</i>	<i>Coef. Est.</i>	<i>Coef. Est.</i>	<i>Coef. Est.</i>	<i>Coef. Est.</i>	<i>Coef. Est.</i>
	<i>(p-val)</i>	<i>(p-val)</i>	<i>(p-val)</i>	<i>(p-val)</i>	<i>(p-val)</i>	<i>(p-val)</i>
<i>Litigation</i>	0.0104 (0.561)	<b>-0.0272**</b> <b>(0.020)</b>	0.0257 (0.239)			
<i>Litigation x Abs_DA</i>	<b>-0.3424**</b> <b>(0.036)</b>	-0.0645 (0.685)	<b>-0.5343**</b> <b>(0.029)</b>			
<i>Lawsuit_CL</i>				0.0001 (0.999)	-0.0006 (0.678)	0.0018 (0.548)
<i>Lawsuit_CL x Abs_DA</i>				<b>-0.0303*</b> <b>(0.072)</b>	-0.0049 (0.530)	<b>-0.0850***</b> <b>(0.009)</b>
<i>Abs_DA</i>	-0.1148 (0.392)	-0.1435 (0.413)	-0.1239 (0.419)	-0.1945 (0.145)	-0.1576 (0.304)	-0.1989 (0.346)
<i>Tenure</i>	0.0030 (0.200)	0.0037 (0.384)	0.0012 (0.838)	0.0032 (0.184)	0.0043 (0.295)	0.0014 (0.808)
<i>Busy</i>	0.0116 (0.325)	0.0101 (0.174)	0.0072 (0.665)	0.0113 (0.307)	0.0114 (0.125)	0.0063 (0.705)
<i>Ln_ARC</i>	<b>-0.0569**</b> (0.021)	<b>-0.0882**</b> (0.031)	-0.0374 (0.142)	<b>-0.0590**</b> (0.019)	<b>-0.0876**</b> (0.035)	<b>-0.0412*</b> (0.078)
<i>Size</i>	0.0025 (0.299)	0.0051 (0.100)	-0.0018 (0.614)	0.0032 (0.261)	0.0048 (0.111)	-0.0009 (0.754)
<i>Countweak</i>	-0.0013 (0.724)	-0.0126 (0.222)	0.0065 (0.524)	-0.0022 (0.496)	-0.0139 (0.136)	0.0055 (0.617)
<i>Mtb</i>	-0.0017 (0.558)	0.0012 (0.563)	-0.0030 (0.253)	-0.0024 (0.330)	0.0007 (0.654)	-0.0041* (0.090)
<i>Roa</i>	0.0511 (0.127)	0.0307 (0.553)	0.0470 (0.233)	0.0562* (0.082)	0.0381 (0.459)	0.0514 (0.152)
<i>Leverage</i>	0.0211 (0.143)	0.0345 (0.201)	0.0394 (0.137)	0.0195 (0.215)	0.0369 (0.169)	0.0357 (0.166)
<i>Loss</i>	0.0122 (0.348)	0.0199 (0.316)	-0.0132 (0.233)	0.0127 (0.329)	0.0189 (0.360)	-0.0127 (0.279)
<i>Exter_fin</i>	0.0027 (0.760)	0.0099 (0.446)	0.0040 (0.731)	0.0033 (0.706)	0.0104 (0.441)	0.0053 (0.643)
<i>Restruct</i>	0.0094 (0.256)	0.0195* (0.078)	0.0088 (0.497)	0.0104 (0.201)	0.0204* (0.073)	0.0107 (0.410)
<i>Complexity</i>	0.0097* (0.096)	0.0076 (0.345)	0.0116 (0.182)	0.0098 (0.118)	0.0099 (0.186)	0.0116 (0.186)

**TABLE 13. (Panel A. continued)**

<i>Inventory</i>	0.0324 (0.146)	0.0221 (0.772)	0.0386 (0.391)	0.0360 (0.116)	0.0384 (0.586)	0.0408 (0.418)
<i>Receivables</i>	-0.0258 (0.521)	-0.0064 (0.885)	-0.0572 (0.329)	-0.0309 (0.426)	-0.0032 (0.945)	-0.0694 (0.239)
Ind F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Auditor F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,191	2,191	2,191	2,191	2,191	2,191
R-squared	0.336	0.137	0.353	0.335	0.136	0.353

<i>Panel B. Alternative Readability Measure</i>	(1)	(2)	(3)
	<i>Read_Grade_Fog</i>		
	CAM	Description	Response
<i>Variables</i>	<i>Coef. Est. (p-val)</i>	<i>Coef. Est. (p-val)</i>	<i>Coef. Est. (p-val)</i>
<i>Litigation</i>	0.0022 (0.871)	<b>-0.0317**</b> <b>(0.049)</b>	0.0185 (0.282)
<i>Abs_DA</i>	0.0663 (0.469)	-0.0071 (0.943)	0.1136 (0.341)
<i>Litigation x Abs_DA</i>	<b>-0.3498**</b> <b>(0.017)</b>	-0.1719 (0.304)	<b>-0.4062**</b> <b>(0.050)</b>
<i>Tenure</i>	-0.0050 (0.159)	-0.0065 (0.107)	-0.0066 (0.143)
<i>Big4</i>	0.0206* (0.064)	0.0177 (0.179)	0.0304** (0.034)
<i>IndSpecial</i>	-0.0076 (0.198)	-0.0091 (0.187)	-0.0058 (0.449)
<i>Busy</i>	-0.0019 (0.809)	0.0064 (0.459)	-0.0031 (0.757)
<i>Ln_ARC</i>	-0.0304*** (0.008)	-0.0567*** (0.000)	-0.0139 (0.337)
<i>Size</i>	-0.0021 (0.349)	0.0014 (0.621)	-0.0034 (0.257)
<i>Countweak</i>	0.0009 (0.913)	-0.0037 (0.638)	0.0127 (0.134)
<i>Mtb</i>	-0.0008 (0.638)	-0.0005 (0.784)	-0.0003 (0.885)
<i>Roa</i>	0.0306 (0.365)	0.0271 (0.489)	0.0598 (0.141)
<i>Leverage</i>	0.0175 (0.245)	0.0295* (0.097)	0.0317* (0.087)
<i>Loss</i>	0.0008 (0.931)	0.0037 (0.731)	-0.0085 (0.480)

**TABLE 13. (Panel B. continued)**

<i>Exter_fin</i>	-0.0057 (0.369)	-0.0050 (0.516)	0.0028 (0.731)
<i>Restruct</i>	-0.0068 (0.271)	0.0078 (0.262)	-0.0081 (0.305)
<i>Complexity</i>	-0.0000 (0.996)	-0.0023 (0.678)	0.0016 (0.791)
<i>Inventory</i>	0.0760* (0.051)	0.0635 (0.172)	0.0961 (0.117)
<i>Receivables</i>	0.0089 (0.748)	-0.0011 (0.973)	0.0043 (0.908)
Ind F.E.	Yes	Yes	Yes
Intercept	Yes	Yes	Yes
Obs.	2,196	2,196	2,196
R-squared	0.102	0.078	0.085

This table shows the results from OLS regressions, at the CAM level. For ease of interpretation of the coefficients, the natural log of *Bog* (*Read\_Grade\_Fog*) scores in Panel A (B) is multiplied by -1 so that higher values indicate higher *Readability*. In Panel A, column 1 (2, 3) reports the results for CAMs (Description, Response) readability when adding audit firm fixed effects. In addition, Columns 4 (5, 6) use a client specific measure (*Lawsuit\_CL*) as alternative measure of litigation risk to test for CAMs (Description, Response) readability. Robust standard errors are two-way clustered, at the audit and client firm. In Panel B, column 1 (2, 3) report the results when using *Read\_Grad\_Fog* as an alternative measure for CAMs (Description, Response) readability. See Appendix C for all variable definitions. The coefficients are estimated using heteroskedasticity robust standard errors clustered at the client firm level. The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed t-tests.

**TABLE 14. Factor Similarities that Explain CAM Disclosure Boilerplate**

<i>Variables</i>	(1)	(2)	(3)
	<i>Similarity_score</i>		
	<i>Coef. Est.</i> <i>(p-val)</i>	<i>Coef. Est.</i> <i>(p-val)</i>	<i>Coef. Est.</i> <i>(p-val)</i>
<i>SimilarLitigRisk</i>	0.0173*** (0.004)	0.0210*** (0.000)	0.0209*** (0.000)
<i>SimilarAbs_DA</i>	0.0134*** (0.000)	0.0126*** (0.008)	0.0126*** (0.002)
<i>SimilarLitigRisk x SimilarAbs_DA</i>	-0.0188*** (0.000)	-0.0164*** (0.000)	-0.0159*** (0.000)
<i>SimilarTenure</i>	-0.0200*** (0.000)	-0.0188*** (0.000)	-0.0192*** (0.000)
<i>SimilarBig4</i>	0.0668*** (0.000)	-0.0629*** (0.000)	-0.0630*** (0.000)
<i>SimilarIndSpecial</i>	0.0024 (0.259)	-0.0010 (0.423)	-0.0014 (0.373)
<i>SimilarBusy</i>	-0.0058 (0.236)	-0.0083 (0.136)	-0.0085 (0.146)
<i>SimilarLnARC</i>	0.0013 (0.301)	-0.0099*** (0.000)	-0.0102*** (0.000)
<i>SimilarSize</i>	0.0213*** (0.004)	0.0165** (0.028)	0.0163** (0.028)
<i>SimilarCountweak</i>	0.0010 (0.445)	-0.0061 (0.255)	-0.0062 (0.246)
<i>SimilarMtb</i>	0.0210*** (0.000)	0.0234*** (0.000)	0.0230*** (0.000)
<i>SimilarRoa</i>	0.0043* (0.080)	0.0027 (0.196)	0.0023 (0.226)
<i>SimilarLeverage</i>	-0.0005 (0.415)	-0.0006 (0.385)	-0.0010 (0.283)
<i>SimilarLoss</i>	-0.0074 (0.158)	-0.0034 (0.315)	-0.0035 (0.335)
<i>SimilarExterFin</i>	0.0095* (0.054)	0.0098* (0.074)	0.0096** (0.040)
<i>SimilarRestruct</i>	0.0172*** (0.000)	0.0101*** (0.000)	0.0098*** (0.000)
<i>SimilarOpComplex</i>	0.0034*** (0.008)	0.0026** (0.040)	0.0023** (0.048)
<i>SimilarInventory</i>	-0.0204*** (0.000)	-0.0185*** (0.000)	-0.0188*** (0.000)
<i>SimilarReceivables</i>	0.0105** (0.010)	0.0063* (0.068)	0.0059 (0.106)
<i>SameSic2</i>	0.0178*** (0.000)	0.0103*** (0.000)	0.0087** (0.010)
<i>SameAuFirm</i>		0.6526*** (0.000)	0.6503*** (0.000)

**TABLE 14. (continued)**

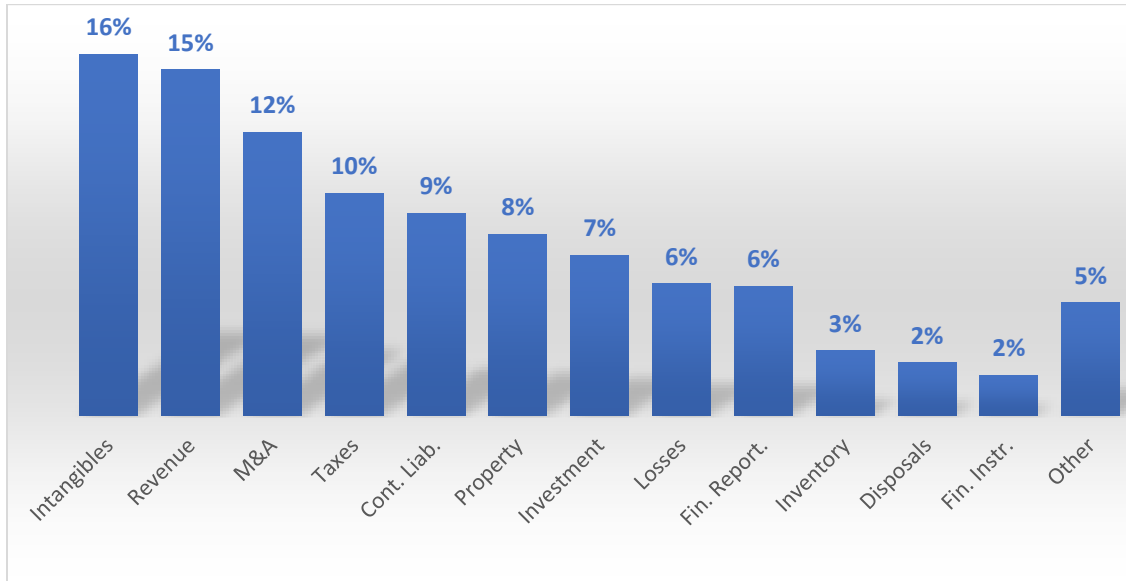
<i>SameAuOffice</i>			0.0103*** (0.000)
<i>SameAuPartner</i>			0.0158*** (0.000)
Intercept	Yes	Yes	Yes
Obs.	4,820,220	4,820,220	4,820,220
R-squared	0.008	0.416	0.417

This table shows the results when dependent variable is CAM *Boilerplate*, and the coefficients are estimated from QAP regressions. All the variables have been transformed into matrices to capture CAM similarities across the covariates included in model 1. See Appendix E for how the matrix variables are determined. Since these variables are at different scales, they have been standardized with a mean of zero and standard deviation of one. Column 1 reports the coefficient from model 1. In Column 2 (3), model 1 is expanded with variables for same audit firm (audit office and audit partner). The p-values are in parentheses. \*\*\*, \*\*, and \* denotes a significance of less than 0.01, 0.05, and 0.10, respectively, based on two-tailed QAP nonparametric tests for structural data.

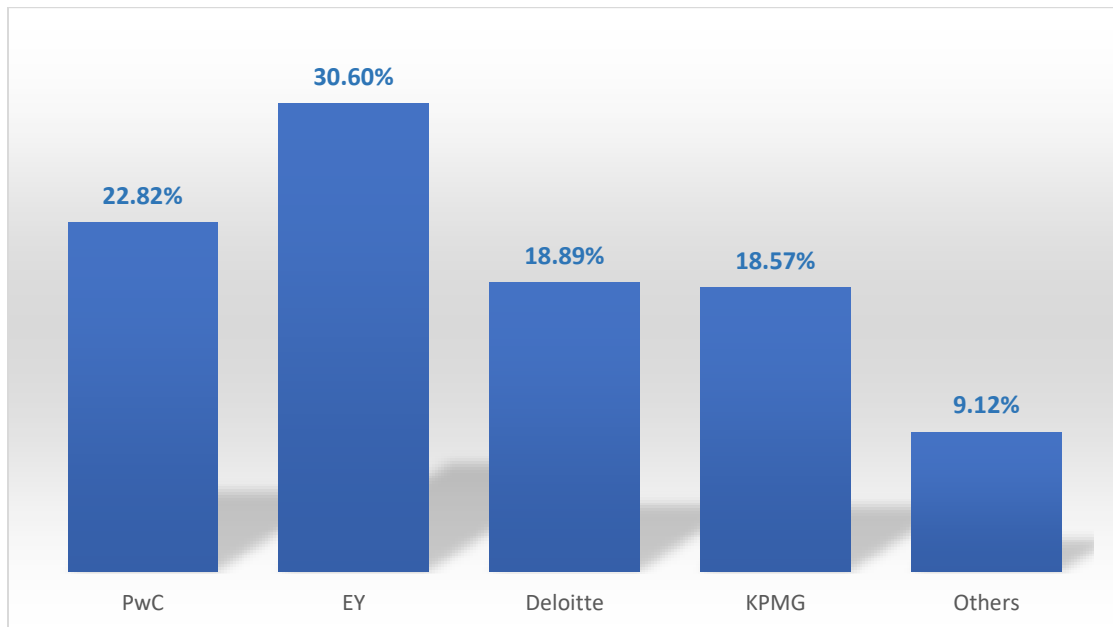


**FIGURE 1. Frequency Distributions**

**a) Distribution of CAMs by Topic Categories**

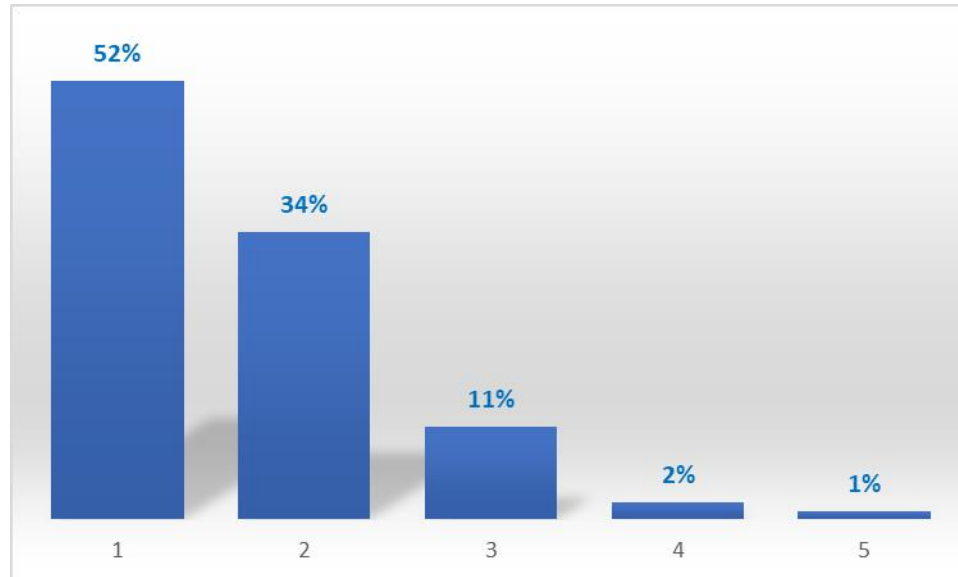


**b) Distribution of Total CAMs by Audit Firm**



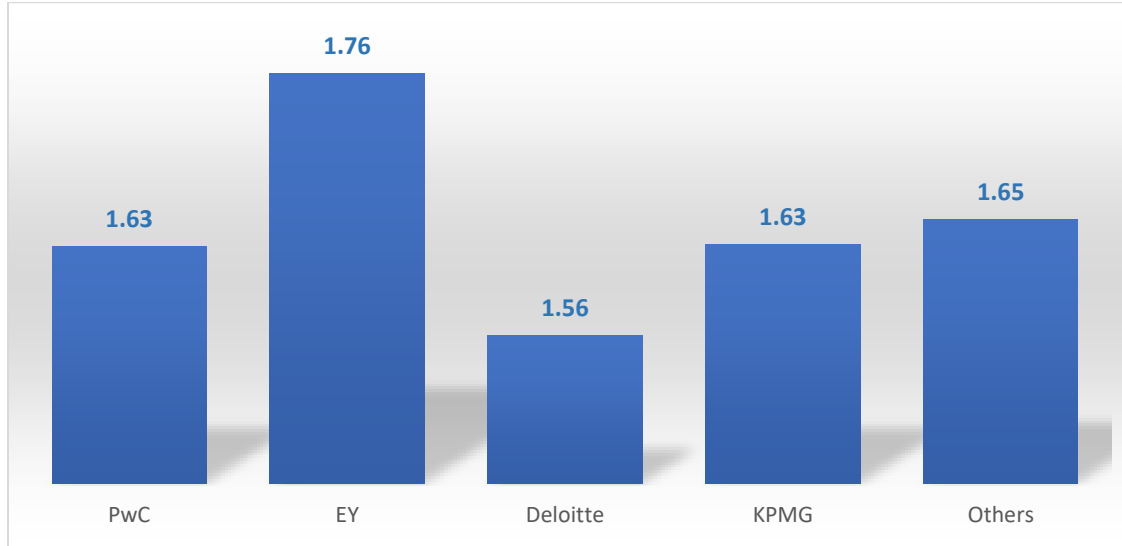
**FIGURE 1. Frequency Distributions (continued)**

**c) Distribution of the Number of CAMs in Audit Report per Audit Firm**

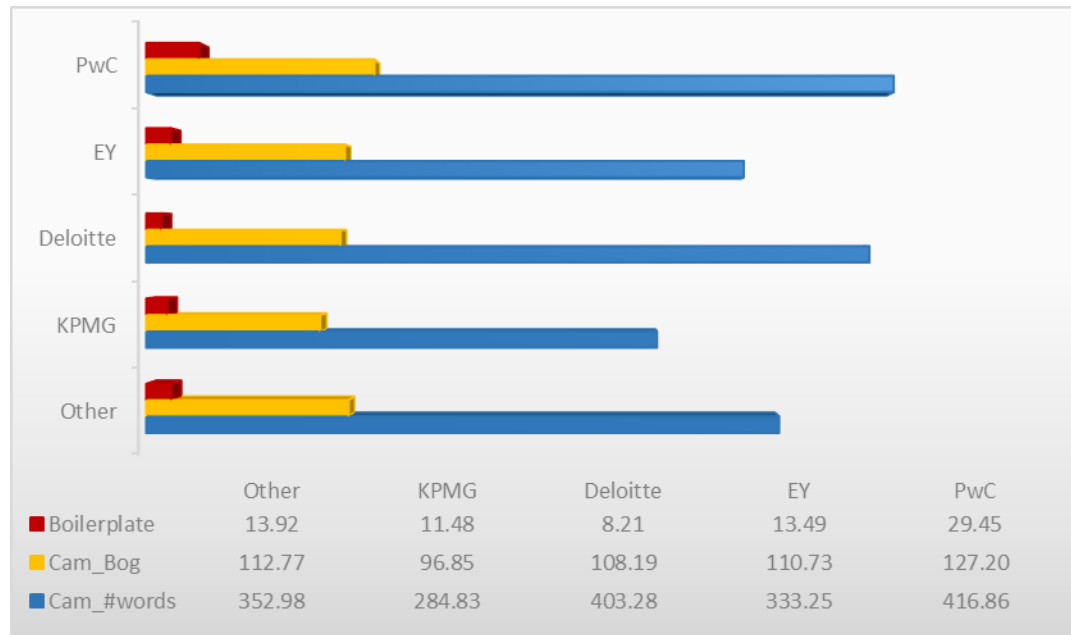


**FIGURE 2. Average Values of CAM Variables by Audit Firm**

**a) Average Number of CAMs in Audit Report by Audit Firm**



**b) Average CAM Boilerplate, Readability, and Text Length, by Audit Firm**



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## CHAPTER 5

### CONCLUSIONS

This study presents early evidence on the number and textual attributes of CAMs communicated in audit reports of public companies as part of new reporting requirements introduced by AS 3101. Specifically, I examine whether the number and textual attributes of reported CAMs in the audit report vary with litigation risk, financial reporting quality, and the interaction between these two factors. I also examine whether audit effort proxied by audit fees and audit report lag varies with the number and textual attributes of CAMs in audit reports. My motivation for these examinations is based on the discussions and comments from public accounting firms during the PCAOB public outreach period, prior to the adoption of the new audit standard. These comments suggest that higher exposure to litigation risk of shareholder lawsuits and related legal costs, as well as higher audit costs due to increased reporting effort are the main issues that have concerned auditors as potential negative consequences of the new reporting requirements.

Test results from employing multiple litigation measures and model specifications, show positive and significant association between litigation risk and number of CAMs (H1a), negative and significant association between financial reporting quality and number of CAMs (H2a), but no significant associations between litigation risk or financial reporting quality and CAM readability or textual length. The boilerplate language is largely affected by the audit firm rather than audit office or partner. This result suggests that CAM disclosure language is likely to have been determined at the audit firm instead of at the engagement level as required by the standard, and that audit reports continue to present highly standardized language.

Next, I find that the interaction between litigation risk and financial reporting quality is not associated with the number of CAMs (H3a) but significantly associated with CAM readability, whereby clients with lower financial reporting are issued less readable CAM disclosures. The information hypothesis suggests that lower readability relates to inherent complex issues being described while the obfuscation hypothesis suggests that lower readability is used to obfuscate earnings management (or lower financial reporting quality). If the lower readability of CAMs is due to complex issues, then the low readability would be manifested in the Description component. However, the detailed examination shows that the lower readability is mostly manifested in the auditor Response component thus rejecting the information hypothesis but not the obfuscation hypothesis. Overall, these results suggest complementary effects of litigation risk, financial reporting quality, and the interaction between the two on the quantity and quality of CAM disclosures in the audit report whereby auditors will disclose more CAMs to protect themselves but less readable and more boilerplate CAMs when they have to protect their client from “looking bad”.

Finally, the test results from model (2) show that as the number of CAMs in the audit report increases, audit effort and costs increase. However, there is no evidence that CAM readability or text length has implications for audit fees or audit report delay.

This study faces a few limitations. First, the changes in reporting requirements are very recent and the small sample size may limit the power of some of the tests. Second, this study performs cross-sectional analyses using data only from the first year. While the strong theoretical ground provides confidence in the generalizability of results with respect to litigation risk and financial reporting quality, the study is not able to determine whether the increase in audit costs are of temporary or persistent nature. These limitations remain

to be addressed by future research. Lastly, although the models control for several confounding factors, the results of this study cannot provide causal evidence.

Nevertheless, I believe that the results reported in this study suggesting a negative association between financial reporting quality and number of reported CAMs can be of interest to investors when evaluating the CAMs disclosed in the audit report. Moreover, the results suggesting a positive association between number of reported CAMs and audit fees can be of interest to managers when exploring ways to mitigate the high audit costs and long audit report lags. Further, the results suggesting a positive association between litigation risk and number of reported CAMs confirm that auditors report consistent with their concerns voiced during the PCAOB public outreach period prior to standard adoption and can be of interest to standard setters when evaluating potential unintended consequences of new reporting requirements.

## APPENDIX A: CAM Readability – Method Details and Examples

### A1. The Readability Measures

#### **Bog**

The Bog index score is a recent measure of readability calculated using *StyleWriter–The Plain English Editor*, a computational linguistics software program. Early accounting and finance literature has commonly relied on the Fog index as a measure of readability. The index was developed in the 1950s to evaluate text for schoolbooks and its major criticism is that words with more than two syllables – such as corporation, financial, undervalued – are considered complex words that decrease a document’s readability, although commonly contained in business texts (Loughran and McDonald, 2014). The key feature of the Bog index is the 200,000-word dictionary where each word has been graded from easy to difficult depending on its frequency and ease of understanding. Thus, the index overcomes the criticisms on Fog index.

The Bog index was introduced and validated by the multi-method study from Bonsall IV et al. (2017). Unlike other readability formulas, Bog is a multifaceted index that measures redundant phrases, passive verbs, hidden verbs, and other style issues. However, it also considers characteristics of good writing style, too. Finally, the software adjusts readability scores depending on how the researcher sets the writing task and the audience. In accordance with the purpose of audit report, in this study I set the writing task *Report* and the audience *Public*.

The formula for Bog index is:

$$\text{Bog Index} = \text{Sentence Bog} + \text{Word Bog} - \text{Pep}$$

Where Bog is anything that detracts from easy reading and Pep is anything that makes the text easier to read and more interesting. The first component is *Sentence Bog* which identifies readability issues arising from sentence length and is higher for longer sentences.

The formula of this component is:

$$\text{Sentence Bog} = (\text{Average Sentence Length})^2 / \text{Long Sentence Limit of 35 words}$$

The second component is *Word Bog* which captures problems from difficult (rather than lengthy) words and phrases based on a proprietary dictionary. The formula of this component is:

$$\text{Word Bog} = (\text{Style Problems} + \text{Heavy Words} + \text{Abbrev} + \text{Special}) * 250$$

The last component is *Pep* which reduces the index because it captures good writing style by considering interesting words, variation in the sentence, direct questions, etc. The formula for the Pep component of sentence variety is:

$$\text{Sentence Variety} = (\text{Standard Deviation} * 10) / \text{Average Sentence Length}$$

### ***Reading Grade - Fog***

Lastly, in additional analysis I use the reading grade as an alternative measure of Readability. The *StyleWriter* software calculates the measure very similar to the Fog Index formula:

$$\text{Read\_Grade\_Fog} = 0.4 * (\text{average number of words per sentence}) - 2 * (\text{Word Difficulty})$$

By construction, higher values of Bog or *Read\_Grade\_Fog* indicate lower readability.<sup>25</sup>

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<sup>25</sup> More detailed information on the index formula and *StyleWriter* software is available at: [https://irp-cdn.multiscreensite.com/aaf9e928/files/uploaded/Towards\\_A\\_Better-Readability\\_Measure.pdf](https://irp-cdn.multiscreensite.com/aaf9e928/files/uploaded/Towards_A_Better-Readability_Measure.pdf)



*A2. High and Low CAM Readability Examples*

<p>Company: HNI Corp</p> <p>Audit Firm: KPMG LLP</p> <p>CAM: Goodwill</p> <p><i>CAM Bog Score (Rating) = 56 (Fair)</i></p> <p><i>Description Bog Score (Rating) = 59 (Fair)</i></p> <p><i>Response Bog Score (Rating) = 59 (Fair)</i></p>	<p>Company: AMERISOURCEBERGEN</p> <p>Audit Firm: EY</p> <p>CAM: Goodwill</p> <p><i>CAM Bog Score (Rating) = 136 (Dreadful)</i></p> <p><i>Description Bog Score (Rating) = 132 (Dreadful)</i></p> <p><i>Response Bog Score (Rating) = 157 (Dreadful)</i></p>
<p>Description</p> <p>As discussed in Note 7 of the consolidated financial statements, the Company’s goodwill balance as of December 28, 2019 was \$270.8 million or 19% of total assets. Of this amount, the goodwill associated with the three reporting units within the office furniture segment was \$28.5 million, or 11% of goodwill. Annually, or whenever events and circumstances indicate that goodwill might be impaired, the Company performs goodwill impairment testing. Impairment occurs when the carrying value of a reporting unit exceeds its fair value. In performing the assessment of the carrying value, the Company estimates the fair value of each reporting unit using an average of values derived from an income approach (discounted projected cash flow method) and a market approach (guideline company method).</p> <p>We identified the assessment of the carrying value of goodwill in three of the Company’s reporting units as a critical audit matter. The evaluation of projected revenue and gross margin, discount rate, and market multiple assumptions used in the income or market approaches to measure the estimated fair value of each of the three reporting units required challenging auditor judgment.</p>	<p>Description</p> <p>The Company tests goodwill for impairment at the level of reporting referred to as a reporting unit. As discussed in Note 1 of the consolidated financial statements, the Company identified its reporting units based upon its management reporting structure. Goodwill arising from acquisitions has been assigned to the reporting unit or units as of the acquisition date that are expected to benefit from the synergies of the combination. When identifying its reporting units, the Company has aggregated two or more components within an operating segment that have similar economic characteristics.</p> <p>The determination of whether two or more components within an operating segment have similar economic characteristics requires the Company to evaluate the characteristics of the respective components, which include the similarity of long-term gross margins, the nature of the products and services, the nature of the production processes, the type or class of customer, the methods used to distribute products or provide their services, and the nature of the regulatory environment. However, not each of these factors must be met for two components to be considered</p>

<p>Changes to those assumptions could have a significant effect on the estimated fair value of each of these three reporting units.</p> <p>Response</p> <p>The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company’s goodwill impairment process, including controls related to development of the projected revenue and gross margin, discount rate, and market multiple assumptions. We evaluated the projected revenue for each of the three reporting units by comparing expected volume growth and price increases to market data, including third-party industry projections and economic forecasts, and historical Company growth rates and price increases. We evaluated the projected gross margin for each of the three reporting units by comparing expected gross margin changes to historical Company and peer company gross margin rates. We compared the Company’s historical revenue and gross margin projections to actual results to assess the Company’s ability to accurately forecast. We performed a sensitivity analysis over the Company’s discount rate assumptions to assess the impact on the Company’s estimate of the fair value of the reporting units. We involved a valuation professional with specialized skills and knowledge, who assisted in:</p> <ul style="list-style-type: none"> <li>• Evaluating the discount rate used by the Company in the income approach by comparing the Company’s inputs to the discount rate to publicly available data for comparable companies and assessing the resulting discount rate;</li> <li>• Testing the estimated reporting unit fair value, using the Company’s discount rate and forecasted cash flows, and comparing the results to the reporting unit’s carrying value per the Company’s impairment tests.</li> </ul>	<p>economically similar, and the considerations are not limited to these factors.</p> <p>Auditing management’s determination of reporting units is highly subjective and significant judgment is involved when evaluating whether two or more components have similar economic characteristics for purposes of aggregation into a single reporting unit. A change in the judgment used in the determination of a reporting unit could result in goodwill impairment.</p> <p>Response</p> <p>We tested the Company’s internal controls related to management’s identification of its reporting units. For example, we tested controls over management’s review of documentation of the criteria assessed when determining whether one or more components within an operating segment have similar economic characteristics.</p> <p>To test the Company’s aggregation of two or more components within an operating segment into a single reporting unit, our substantive audit procedures included, among others, evaluating whether the aggregated components have similar economic characteristics. As part of our evaluation, we considered (i) the similarity of long-term gross margins of the aggregated components; (ii) the similarity of the nature of the regulatory environments of the aggregated components; (iii) the similarity of the products and services of the aggregated components; (iv) the similarity of the types or classes of customer of the aggregated components, and (v) the methods used to distribute products or provide services of the aggregated components. We corroborated the Company’s assessment of aggregation of components by reviewing reports used by segment management, including the financial performance of the respective components, to assess the aggregation criteria.</p>
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<ul style="list-style-type: none"><li>• Assessing the guideline public companies and the selected multiples based on consideration of revenue growth, profitability, and size.</li></ul>	
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## APPENDIX B: CAM Boilerplate Language – Method Details and Examples

### B1. *The Method for Determining the Boilerplate scores*

I use WCopyFind, a text re-use detection software program, to calculate CAM language similarity.<sup>26</sup> The software compares text or word processor documents with one another to determine if they share words in phrases and calculates the number of words in text strings appearing in two documents and allows the user to control the parameters. Following prior studies (e.g., McMullin, 2016; Campbell et al. 2020) I make the following choices:

**Shortest Phrase to Match** — the minimum string length considered to be a match. For example, when this parameter is set to 6, the program ignores matching phrases that are only 5 words long or less. As recommended by the creator, I leave this parameter at 6 (words).

**Most Imperfections to Allow** — the maximum number of non-matches the program will allow between perfectly matching portions of a phrase. I set this parameter to 3.

**Minimum % of Matching Words** —the minimum percentage of perfect matches that a phrase can contain and be considered a match. Setting this value at 100 limits the program to finding only perfect matches. I set the parameter to 50 percent.

**Fewest Matches to Report** — the fewest matching words in a pair of documents that will cause the program to report a match in its output. There is no recommended value for this parameter, and I set it to 20. Hence, my output shows only 801,294 pairs and I set the missing values to zero.

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<sup>26</sup> The WCopyFind software was developed and is made freely available for download by Lou Bloomfield, a physics professor at the University of Virginia. Available at: <https://plagiarism.bloomfieldmedia.com/software/wcopyfind/>

Lastly, I set the program to ignore punctuations, numbers, letter case, and words longer than 20 characters.

B2.1. Example 1 – overlap within the audit firm within same topic

<p>Company: Crestwood Audit Firm: EY CAM (1539): Goodwill</p>	<p>Similarity score = 221</p>	<p>Company: GARMIN Audit Firm: EY CAM: Goodwill</p>
<p>The Partnership’s <u>goodwill</u> is attributable to past acquisitions and is assigned <u>to reporting units as of the acquisition date. As discussed in Note 2 to the consolidated financial statements, goodwill is tested for impairment at least annually at the reporting unit level. At December 31, 2019, the Partnership’s goodwill in its Powder River Basin (“PRB”) reporting unit was \$80.3 million.</u></p> <p><u>Auditing management’s annual goodwill impairment test for the PRB reporting unit was complex and highly judgmental due to the significant estimation required in determining the fair value of the reporting unit and the sensitivity of the fair value compared to the carrying amount for this reporting unit. The fair value estimate was sensitive to significant assumptions, such as the weighted average cost of capital, revenue growth rate, operating margin, and terminal value, which are affected by expectations about future market or economic conditions.</u></p> <p><u>We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Partnership’s goodwill impairment review process, including controls over management’s review of the significant assumptions described above.</u></p> <p><u>To test the estimated fair value of the Partnership’s PRB reporting unit, we performed audit procedures that included, among others, assessing methodologies and</u></p>		<p>The Company assigns <u>goodwill</u> acquired in business combinations <u>to its reporting units as of each acquisition date. At December 28, 2019, the Company’s goodwill balance related to the auto personal navigation device (“auto PND”) reporting unit was approximately \$80 million. As discussed in Note 2 of the consolidated financial statements, goodwill is tested for impairment at least annually at the reporting unit level.</u></p> <p>The auto PND market has declined in recent years as competing technologies have emerged and market saturation has occurred. This has resulted in periods of lower revenues and profits for the Company’s auto PND reporting unit. Considering these qualitative factors, management performed a step one quantitative impairment test of the auto PND reporting unit in the fourth quarter of 2019. Considering the uncertainty of future operating results and/or market conditions deteriorating faster or more drastically than the forecasts utilized in management’s estimation of <u>fair value</u>, the Company disclosed some or all of the approximately \$80 million of goodwill associated with the auto PND reporting unit is at risk of future impairment.</p> <p><u>Auditing management’s annual goodwill impairment test for the auto PND reporting unit was complex and highly judgmental due to the significant estimation required in determining the fair value of the reporting</u></p>

testing the significant assumptions discussed above and the underlying data used by the Partnership in its analysis. We compared the significant assumptions used by management to current industry and economic trends, changes to the Partnership's business model, and other relevant factors. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the PRB reporting unit that would result from changes in the assumptions. We also involved our valuation specialist to assist in our evaluation of the valuation methodologies applied by the Partnership and the significant assumptions used in estimating the fair value of the PRB reporting unit. We also tested management's reconciliation of the fair value of all the Partnership's reporting units to the market capitalization of the Partnership.

unit. In particular, the fair value estimate was sensitive to significant assumptions such as the discount rate, projected future revenues, projected future operating margins, and terminal growth rates which are affected by expectations about future market or economic conditions.

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's auto PND goodwill impairment review process. For example, we tested controls over management's review of the significant assumptions (e.g., discount rate, projected revenue growth rates, projected operating margins, terminal growth rates) used to develop the prospective financial information (PFI) for the quantitative analysis. We also tested management's controls to validate that the data used in the valuation was complete and accurate.

To test the estimated fair value of the Company's auto PND reporting unit, we performed audit procedures that included, among others, assessing the methodology and testing the significant assumptions discussed above and the underlying data used by the Company in its analysis. We included valuation specialists on our team to review the Company's model, method, and the more sensitive assumptions such as the discount rate and terminal growth assumptions. We compared the significant assumptions used by management to current industry and economic trends, changes to the Company's business model, forecasts used in the Company's annual operating plans and other relevant factors. We assessed the historical accuracy of management's forecast estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the auto PND reporting unit that would result from changes in the assumptions. We reconciled the fair value of the reporting unit to its carrying amount, testing the Company's determination

	of the assets and liabilities used within the reporting unit that are the basis for the carrying amount. In addition, <u>we tested management’s reconciliation of the fair value of the reporting units to the market capitalization of the</u> Company.
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B2.2. Example 2 – overlap within audit firm across topics

Company: Crestwood Audit Firm: EY CAM: Valuation of goodwill	Similarity score = 82	Company: SKYWEST Audit Firm: EY CAM: Other contingent liabilities
<p>The Partnership’s goodwill is attributable to past acquisitions and is assigned to reporting units as of the acquisition date. As discussed in Note 2 to the consolidated financial statements, goodwill is tested for impairment at least annually at the reporting unit level. <u>At December 31, 2019, the</u> Partnership’s goodwill in its Powder River Basin (“PRB”) reporting unit was \$80.3 million.</p> <p><u>Auditing</u> management’s annual goodwill impairment test for the PRB reporting unit was <u>complex and highly judgmental due to the significant estimation required in determining the</u> fair value of the reporting unit and the sensitivity of the fair value compared to the carrying amount for this reporting unit. <u>The</u> fair value <u>estimate was sensitive to significant assumptions, such as</u> the weighted average cost of capital, revenue growth rate, operating margin, and terminal value, which are affected by expectations about future market or economic conditions.</p> <p><u>We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the</u> Partnership’s goodwill impairment review <u>process</u>, including <u>controls</u></p>	<p><u>At December 31, 2019, the</u> Company’s workers’ compensation liability balance totaled \$23.9 million, presented as a component of other current liabilities and other long-term liabilities on the balance sheet. The Company discusses the estimate related to the workers’ compensation within Note 5, Commitments and Contingencies.</p> <p><u>Auditing</u> the estimated ultimate losses associated with the workers’ compensation liability is <u>complex and highly judgmental due to the significant estimation required in determining the</u> ultimate aggregate liabilities for claims incurred. In particular, <u>the estimate was sensitive to significant assumptions such as</u> the estimation of loss payment and loss reporting development patterns.</p> <p><u>We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the</u> Company’s workers’ compensation liability <u>process</u>. As part of our testing, we also considered <u>controls over management’s review of the significant assumptions</u> noted <u>above</u>. We also tested controls performed by management to review</p>	

<p><u>over management’s review of the significant assumptions</u> described <u>above</u>.</p> <p><u>To test the estimated</u> fair value of the Partnership’s PRB reporting unit, <u>we performed audit procedures that included, among others, assessing methodologies and testing the significant assumptions</u> discussed above <u>and the underlying data used by the Partnership in its analysis</u>. We compared the significant assumptions used by management to current industry and economic trends, changes to the Partnership’s business model, and other relevant factors. <u>We assessed the historical accuracy of management’s estimates</u> and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the PRB reporting unit that would result from changes in the assumptions. <u>We</u> also involved <u>our</u> valuation <u>specialist</u> to assist in our evaluation of the valuation <u>methodologies</u> applied by the Partnership <u>and the significant assumptions</u> used in <u>estimating</u> the fair value of the PRB <u>reporting</u> unit. We also tested management’s reconciliation of the fair value of all the Partnership’s reporting units to the market capitalization of the Partnership.</p>	<p>the historical estimates of the workers’ compensation liability for accuracy.</p> <p><u>To test the estimate of the</u> Company’s workers’ compensation liability, <u>we performed audit procedures that included, among others, assessing methodologies and testing the significant assumptions</u> used in estimating the worker’s compensation liability <u>and the underlying data used by the Company in its analysis</u>. <u>We</u> utilized the assistance of <u>our</u> actuarial <u>specialists</u> in assessing the reasonableness of the <u>methodologies</u> used <u>and significant assumptions</u> applied, including the <u>estimation</u> of loss payment and loss <u>reporting</u> development patterns, as well as developing an independent projection of the Company’s unpaid claims obligations. <u>We</u> also <u>assessed the historical accuracy of management’s estimates</u>.</p>
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B2.3. Example 3 –overlap across audit firms across topics

<p>Company: Crestwood Audit Firm: EY CAM: Valuation of goodwill</p>	<p>Similarity score = 22</p>	<p>Company: HERBALIFE Audit Firm: PwC CAM: Other contingent liabilities</p>
<p>The Partnership’s goodwill is attributable to past acquisitions and is assigned to reporting units as of the acquisition date. <u>As</u> discussed <u>in Note 2 to the consolidated financial</u></p>	<p><u>As</u> described <u>in Note 7 to the consolidated financial statements</u>, the Company <u>is</u> from time to time engaged in routine litigation. <u>As</u> disclosed by management, an estimated loss</p>	



statements, goodwill is tested for impairment at least annually at the reporting unit level. At December 31, 2019, the Partnership's goodwill in its Powder River Basin ("PRB") reporting unit was \$80.3 million.

Auditing management's annual goodwill impairment test for the PRB reporting unit was complex and highly judgmental due to the significant estimation required in determining the fair value of the reporting unit and the sensitivity of the fair value compared to the carrying amount for this reporting unit. The fair value estimate was sensitive to significant assumptions, such as the weighted average cost of capital, revenue growth rate, operating margin, and terminal value, which are affected by expectations about future market or economic conditions.

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Partnership's goodwill impairment review process, including controls over management's review of the significant assumptions described above.

To test the estimated fair value of the Partnership's PRB reporting unit, we performed audit procedures that included, among others, assessing methodologies and testing the significant assumptions discussed above and the underlying data used by the Partnership in its analysis. We compared the significant assumptions used by management to current industry and economic trends, changes to the Partnership's business model, and other relevant factors. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the PRB reporting unit that would result from changes in the assumptions. We also involved our valuation specialist to assist in our evaluation of the valuation methodologies applied by the Partnership and the significant assumptions used in estimating the fair value of the PRB

from a loss contingency is recorded when information available prior to issuance of the Company's financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and the amount of the loss can be reasonably estimated.

Management also discloses material contingencies when they believe a loss is not probable but reasonably possible. Management regularly reviews all pending litigation matters in which it is involved and establishes reserves for these litigation matters when a probable loss estimate can be made. Accounting for contingencies such as legal and non-income tax matters requires management to use judgment related to both the likelihood of a loss and the estimate of the amount or range of loss.

The principal considerations for our determination that performing procedures relating to loss contingencies is a critical audit matter are there was significant judgment by management when assessing the likelihood of a loss being incurred and when determining whether a reasonable estimate of the loss or range of loss for each matter can be made, which in turn led to a high degree of auditor judgment and effort in evaluating management's assessment of loss contingencies associated with legal and non-income tax matters. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of loss contingencies associated with legal and non-income tax matters, including controls over

<p>reporting unit. We also tested management's reconciliation of the fair value of all the Partnership's reporting units to the market capitalization of the Partnership.</p>	<p>determining whether a loss is probable and whether the amount of loss can be reasonably estimated, as well as financial statement disclosures. These <u>procedures also included, among others,</u> obtaining <u>and</u> evaluating <u>the</u> letters of audit inquiry from the Company's external legal counsel, evaluating the reasonableness of management's assessment regarding whether an unfavorable outcome is reasonably possible or probable and reasonably estimable, and evaluating the sufficiency of the Company's contingency disclosures. Professionals with specialized skill and knowledge were used <u>to assist in the evaluation of the</u> completeness and measurement of certain contingencies, evaluation of whether the positions taken by management are reasonable and assessing the audit evidence obtained.</p>
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## APPENDIX C: Variable Definitions

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### *Variables of Interest Definition*

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<i>nrCAMs</i>	<i>Number of critical audit matters disclosed in the audit report since June 30, 2019 until February 29, 2020. (Audit Analytics)</i>
	<i>BOG index is the first readability measure calculated for the whole CAM document. The formula is: Bog Index = Sentence Bog + Word Bog – Pep</i>
	<i>where,</i>
<i>Cam_Bog</i>	$\text{Sentence Bog} = \frac{(\text{Average Sentence Length})^2}{\text{Long Sentence Limit (35 words)}}$ $\text{Word Bog} = (\text{Style Problems} + \text{Heavy Words} + \text{Abbrev} + \text{Special}) * 250$ $\text{Pep} = \frac{(\text{Names} + \text{Interest Words} + \text{Convers}) * 25}{\text{Number of Words}} + \text{Sent. Variety}$ $\text{Sentence Variety} = (\text{Standard Deviation} * 10) / \text{Average Sentence Length}$
<i>Descr_Bog</i>	<i>BOG index calculated as described above, but only for the Description part of the CAM</i>
<i>Resp_Bog</i>	<i>BOG index calculated as described above, but only for the Auditor Response part of the CAM</i>
<i>Read_Bog(Cam)</i>	<i>The natural log of CAM Bog score multiplied by -1</i>
<i>Read_Bog(Descr)</i>	<i>The natural log of Description Bog score multiplied by -1</i>
<i>Read_Bog(Resp)</i>	<i>The natural log of Response Bog score multiplied by -1</i>
<i>Cam_#words</i>	<i>The wordcount in the whole CAM disclosure.</i>
<i>Descr_#words</i>	<i>The word count of the Description component of the CAM</i>
<i>Resp_#words</i>	<i>The word count of the auditor Response component of the CAM.</i>
<i>Ln_words(CAM)</i>	<i>The natural log of number of words in the whole CAM document.</i>
<i>Ln_words(Descr)</i>	<i>The natural log number of words in the Description part of the CAM</i>
<i>Ln_words(Resp)</i>	<i>The natural log of the word count of the Auditor Response</i>
<i>Similarity_score</i>	<i>The number of words in text strings of at least six words in length found in a pair of CAMs.</i>

<i>Boilerplate</i>	<i>The average of Similarity_score at the CAM level. Missing values of Similarity_score are replaced with zeroes.</i>
<i>Litigation</i>	<i>Indicator variable equal to one if the company is in a highly litigious industry, (SIC industry codes 2833–2836, 3570–3577, 3600–3674, 5200 5961, or 7370–7374, following Francis et al. (1994)), and zero otherwise.</i>
<i>Lawsuit_CL</i>	<i>Frequency at which client firms are involved as defendants in class action lawsuits over the past ten years</i>
<i>Lawsuit_AU</i>	<i>the frequency at which audit firms are involved as defendants in lawsuits related to securities over the past ten years</i>
<i>Abs_Da</i>	<i>The absolute value of Discretionary Accruals is the residual from the modified Jones (1991) model ((Dechow et al. 1995), adjusted for performance as suggested by Kothari et al. (2005). (Compustat)</i> $TA = \alpha_0 + \alpha_1(1/lag\_Assets) + \alpha_2[(\Delta SALE - \Delta AR)/lag\_Assets] + \alpha_3(PPE/lag\_Assets) + \alpha_4(lag\_NI/lag\_Assets) + \varepsilon$
<i>Ln_AFees</i>	<i>The logarithm of audit fees plus one. (Audit Analytics)</i>
<i>Ln_Replag</i>	<i>The logarithm of the number of days between fiscal year-end date and auditor signature date plus one. (Audit Analytics)</i>

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***Control Variables***

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<i>Age</i>	<i>The natural logarithm of the number of years the client firm appears in Compustat plus one.</i>
<i>Ln_ARC</i>	<i>The natural log of the count of unique XBRL tags per financial statement disclosure constructed in Hoitash and Hoitash (2018) available here: <a href="http://www.xbrlresearch.com/accounting-reporting-complexity/">http://www.xbrlresearch.com/accounting-reporting-complexity/</a></i>
<i>Big4</i>	<i>Indicator variable which equals 1 if the company is audited from one of the largest four audit firms (PWC, Deloitte, EY, and KPMG) and 0 otherwise. (Compustat)</i>
<i>IndSpecial</i>	<i>Equals 1 for audit office-industry with the highest aggregated audit fees over the last 5 years.</i>
<i>Busy</i>	<i>Indicator variable if the fiscal year ends on December 31.</i>

Complexity	<i>Equals the logarithm of the number of operating segments of the firm. If the data is missing the variable is set equal to business segments. If both data are missing the variable is set to 1 (active firms). (Compustat)</i>
Cfo	<i>The cash flows from operating activities (OANCF) divided by total assets. (Compustat)</i>
Countweak	<i>The number of internal control weaknesses. (Audit Analytics)</i>
Exter_fin	<i>Indicator variable equal to one for non-zero external financing (i.e. if <math>[sstk+prstk-dv+dltis-dltr-dlcch] &gt; 0</math>), and 0 otherwise. (Compustat)</i>
Inventory	<i>Total inventory (invt) scaled by the total assets (at). (Compustat)</i>
Leverage	<i>The sum of long-term debt (DLTT) and short-term debt (DLC) scaled by the total assets. (Compustat)</i>
Loss	<i>Indicator variable equals one if the firm has negative income before extraordinary items (<math>IB &lt; 0</math>). (Compustat)</i>
Mtb	<i>Market-to-book ratio proxies for growth; it is calculated as sum of market value of equity and total liabilities divided by total assets <math>[(prcc\_f \times csho) + (lt)] / (at)</math>, winsorized at the 1% and 99% levels. (Compustat)</i>
Receivables	<i>Total accounts receivables (rect) scaled by the total assets (at). (Compustat)</i>
Restruct	<i>Indicator variable that equals 1 if the company is involved in a restructuring (<math>rca\ rcd\ rceps\ rcp &gt; 0</math>), and 0 otherwise. (Compustat)</i>
Roa	<i>The return on assets proxies for firm operating performance; it is the ratio of net income with total assets. (Compustat)</i>
Size	<i>The logarithm transformed total assets (AT). (Compustat)</i>
Tenure	<i>The natural logarithm of the number of years the auditor has been auditing the financial statements. (Audit Analytics)</i>
Zscore	<i>A proxy for financial distress, the Altman's Z-score is measured as: <math>((1.2*(act-lct) + 1.4*re + 3.3*(pi+xint) + 1.0*sale)/at) + 0.6*(prcc*csho/lt)</math>, winsorized at the 1% and 99% levels. (Compustat)</i>

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#### APPENDIX D: CAM Categories

CAM Categories	Description
Intangibles	CAMs identified by Audit Analytics as relating to goodwill or other intangible assets.
Revenue	CAMs identified by Audit Analytics as relating to revenue, sales returns, interest, or other revenue.
M&A	CAMs identified by Audit Analytics as relating to business combinations.
Taxes	CAMs identified by Audit Analytics as relating to deferred taxes, uncertain tax positions, or other taxes.
Contingent Liabilities	CAMs identified by Audit Analytics as relating to warranties, insurance, or other contingent liabilities.
Property	CAMs identified by Audit Analytics as relating to PPE, capitalization, long-lived assets, reserves, or depreciation.
Investments	CAMs identified by Audit Analytics as relating to equity investments, long-term investments, research and development, other assets, or other investments.
Losses	CAMs identified by Audit Analytics as relating to allowances for losses.
Financial Reporting	CAMs identified by Audit Analytics as relating to going concerns, consolidations, related parties, policy changes, <i>regulatory assets and liabilities</i> , and internal control.
Inventory	CAMs identified by Audit Analytics as relating to inventory.
Disposals	CAMs identified by Audit Analytics as relating to disposals, discontinued operations, or asset retirement obligations.
Financial Instruments	CAMs identified by Audit Analytics as relating to derivatives or other debt.
Pensions	CAMs identified by Audit Analytics as relating to pensions.
Accounts Receivable	CAMs identified by Audit Analytics as relating to accounts receivable.
Leases	CAMs identified by Audit Analytics as relating to leases.
Stock Compensation	CAMs identified by Audit Analytics as relating to stock compensation.
Other	Includes all CAMs not categorized in the categories above, which includes CAMs identified by Audit Analytics as relating to foreign currency, other expenses, shareholder valuation, vendors, SG&A, other liabilities, balance sheet classification, fresh start accounting, <i>and subsidiaries/afiliates</i> .

Note: This CAM taxonomy is based on Drake et al. (2020)

## APPENDIX E

### **Quadratic Assignment Procedure – Method and Variable Details**

#### *E1. QAP Regression*

Relying on network analysis literature, I employ regression with QAP for pairwise data. In QAP analysis, the unit of analysis is a dyad (e.g., a pair of disclosures or a pair of firms) that may or may not have some sort of relation connecting them to one another. The data structure in QAP regression is unique; instead of column vectors, the procedure uses matrices as variables – i.e., each matrix of relations represents a variable, and analogous cells across the set of all matrices together constitute a case. Once a dataset is assembled, the first step of the procedure is to compute regression coefficients and the second step is to repeatedly permute rows and columns of the matrix representing the dependent variable and after each permutation to recompute regression coefficients. Indicators of statistical significance report the proportion of results from randomly altered matrices with coefficients as high as those from the unaltered dependent variable matrix (Krackhardt 1987, 1988). Essentially, what the QAP does is to “scramble” the dependent variable data through permutations, resulting in multiple random datasets, and then perform the coefficient significance test. Note that at each single firm level the row and column remain the same and are permuted in the same way, thus preserving the relationships within, but removing the relationship between, rows and columns.

#### *E2. Pairwise Variables*

Since, the dependent variable *Similarity\_score* is a CAM-pair-wise variable, the QAP regression is the appropriate method and CAM-pair is the unit of analysis. Each

independent variable used in the models is transformed in matrices that represent similarity across those characteristics. The transformation is performed using the routine “Attribute-to-Matrix” in *UciNet* software (Borgatti et al., 2002).

As recommended in the routine, the binary variables are transformed using the exact match. To illustrate: in the matrix variable *SimilarLitig*, each element equals one if *Litigation* variable is one for the pair of CAMs in the corresponding row and column, and zero otherwise; in the matrix variable *SameAuFirm* each element equals one if the corresponding CAMs pair was issued by the same audit firm, and zero otherwise; in the matrix variable *SameAuOffice*, each element equals one if the corresponding CAMs pair was issued by the same audit city office, and zero otherwise; *SameAuPartner* is the matrix variable where each element equals one if the corresponding CAMs pair was issued by the same audit partner and zero otherwise.

As recommended in the “Attribute-to-Matrix” routine of the *UciNet*, the continuous variables are transformed using the identity coefficient. The formula to create the matrices is:

*Matrix X is formed by*  $X(i,j)=[2*\text{vector}(i)*\text{vector}(j)] / [\text{vector}(i)^2+\text{vector}(j)^2]$

After preparing all variables as matrices, I run the QAP regression routine in *UciNet* software with a parameter of 500 permutations and report the standardized coefficients in table 14.



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**Drexel University**, Philadelphia, PA

Master of Business Administration

**University of Tirana**, Tirana, ALBANIA

MS Finance

**University of Pisa**, Pisa, ITALY

Bank and Finance

**TEACHING EXPERIENCE**

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**University of Kentucky**, Lexington, KY

Instructor, Financial Accounting I, Fall 2019 – Spring 2020 (undergraduate, core)

Research and Teaching Assistant Fall 2016-2019, 2020-2021

**Drexel University**, Philadelphia, PA

Assistant Instructor, Business Statistics, Fall 2015 (graduate-MBA, core)

**University of Vlora**, Vlora, ALBANIA

Adjunct Professor, Financial Accounting, Corporate Finance, 2003 – 2007

**OTHER PROFESSIONAL EXPERIENCE**

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**Vlora City Hall**, Vlore, Albania

City Manager, 2010-2014

Director of Internal Audit, 2007-2010

Accountant, Taxation Department, 2004-2007

**HONORS AND AWARDS**

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Gatton College of Business and Economics Teaching Excellence Award – Graduate Student, 2020

Von Allmen School of Accountancy Fellowship, 2016-Present

Deloitte/J. Michael Cook Doctoral Consortium Fellow, 2020

Auditing Section Doctoral Consortium Fellow, 2018, 2020

Financial Accounting and Reporting Section Doctoral Consortium Fellow, 2019

Drexel University Alumni Scholarship, 2014-2015

Honor Society Beta Alpha Psi Membership (Drexel University Chapter)

Honor Society Beta Gamma Sigma Membership (Drexel University Chapter)

The President's Volunteer Service Award (VITA Program, Philadelphia, 2016)

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