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A Pilot Empirical Study of "Intra-Firm Boilerplate" CAM Reporting - DOW 30 Companies

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Abstract

On June 1, 2017, the public company accounting oversight board (PCAOB) promulgated the new auditing standard AS 3101: the auditor's report on an audit of financial statements when the auditor expresses an unqualified opinion. This new standard significantly expands the auditor's report by requiring the inclusion of critical audit matters (CAMs) in an unqualified opinion. The primary objective of this paper is to examine whether the auditors were using an "intra-firm boilerplate" practice in CAM reporting. We analyzed the 10-Ks filed by the DOW 30 companies during the two-year fiscal periods of 2019 and 2020 by comparing the related CAMs. To run the binomial test on SPSS, we coded the relevant qualitative data in our data sheet before operationalizing them into the required binary format.

Our empirical data indicate that most of the CAMs reported in fiscal year 2020 were either on new audit topics or with significant modifications in comparison to 2019. However, a substantial number (37%) of the CAMs reported in fiscal year 2020 were virtually the same as in fiscal year 2019. Our empirical results support former SEC chairperson Jay Clayton's concern on "boilerplate" practice in CAM reporting.

Keywords: AS 3101, auditor's report, boilerplate, CAM, PCAOB, SEC.

I. INTRODUCTION

Starting June 30, 2019, auditors of large accelerated filers are required by the public company accounting oversight board (PCAOB) to expand the auditor's report and include critical audit matters (CAMs) when expressing an unqualified opinion. The change was made in an effort to avoid the binary format of the auditor's report that provided a pass/fail evaluation. The previous binary auditor's opinion was generally considered a "boilerplate" report that did not provide any detailed information regarding the audit procedures and issues of the client (Banham, 2018; Burns, 2019; and Fuller et al., 2021). The primary objective of this study is to investigate whether auditors have made any meaningful improvements after the initial implementation of the new auditing standard, AS 3101: The auditor's report on an audit of financial statements when the auditor expresses an unqualified opinion (PCAOB, 2017). The PCAOB's purpose in expanding the auditor's report is to reduce the asymmetry between the disclosures provided by the auditors and the requirements for enhanced communication demanded by investors. The pass/fail message in the auditor's report has caused investors to skip reading the contents of the auditor's report (Gray et al., 2011). Several comments received by the PCAOB regarding the new CAM requirements "asserted that the reporting of critical audit matters would result in the auditor's report becoming a lengthy list of

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boilerplate disclosures, which would contribute to disclosure overload or run contrary to the SEC's disclosure effectiveness initiative" (PCAOB, 2017, p. 70).

CAM reporting is critical for various reasons. One of the main reasons is that CAM disclosures may influence management's operating decisions such as business expansions, or investment decisions that involve balancing risks and rewards. In a study conducted by Bentley et al. (2021), the authors find that CAM disclosures reduce management's risk tolerance level, and that they would have an effect on management's selection of risk taking activities. Another reason is that CAM reporting has also been beneficial in reducing the auditor's liability exposure (Brasel et al., 2016).

In our view, "boilerplate" CAM reporting may be practiced within an audit firm or commonly shared among audit firms. Within an audit firm, the auditor may provide the same disclosures of an auditing issue (e.g. revenue recognition) without any significant modifications from period to period (referred to as an "intra-firm boilerplate" CAM reporting herein). In contrast, auditors among various firms may follow the same style or a "model" disclosure of an auditing area (referred to as an "inter-firm boilerplate" CAM reporting herein). The contribution of this research study is to examine the "intra-firm boilerplate" practice in CAM reporting over a two-year reporting period within each of the audit firms. We plan to examine the "inter-firm boilerplate" practice in CAM reporting in a future study.

Although various studies have examined CAM reporting in a specific fiscal year, we are particularly interested in the year-over-year changes in CAM reporting by the DOW 30 companies. In this study, we have compared CAMs for the two-year fiscal periods of 2019 and 2020 using the 10-Ks filed by the DOW 30 companies with the securities exchange commission (SEC). We characterized CAMs that have not been significantly modified as an "intra-firm boilerplate" practice (PCAOB, 2017; SEC, 2017). The primary purpose of our study is to verify whether the auditors of the DOW 30 companies have provided the additional information as intended by the PCAOB. We believe that the auditors may not have provided additional value if they merely "checked the box" or followed the audit procedures from the previous year when reporting the CAMs. In our view, even if the same CAM topics (e.g. impairment of goodwill, or revenue recognition) were reported in both years, the facts and circumstances would generally not be the same (e.g. effects caused by changes in interest rates, and/or a pandemic) in both years. For this reason, we expect that the CAM disclosures would address the different facts and circumstances in each fiscal year. Our interpretation of an "intra-firm boilerplate" CAM reporting is supported by the PCAOB that "While the same audit matter may be determined to be a critical audit matter from one year to the next or from one audit to another, the auditor would be expected to tailor the communication of the critical audit matter to the specific facts and circumstances that existed during that particular current period's audit" (PCAOB, 2013, p. A5-35). We believe this study is the first attempt to empirically categorize CAM reporting using actual annual reports of DOW 30 companies.

In conducting the study, we extracted the Report of Independent Registered Public Accounting Firm from the 10-Ks filed by the DOW 30 companies directly from the SEC's EDGAR database. We analyzed these CAMs for the two-year fiscal periods of 2019 and 2020. We developed a coding scheme to categorize the different types of CAMs. To ensure accuracy, a "double blind" approach was employed where the authors each conducted his own analysis and compared the results before finalizing each code. This set of qualitative data was operationalized into the required binary format to run the binomial test on SPSS. We will discuss these procedures in detail in the "Data Collection and Analysis Procedures" section of the paper.

We will discuss the essence of AS 3101 and a literature review in the next section. We will then proffer our research question and hypotheses. In the "Data Collection and Analysis Procedures" section, we will discuss the methodologies for data collection, data analysis, and the binomial test on CAMs reported in 2019 and 2020. Lastly, we will provide the empirical results and summarize the key findings in this study.

II. LITERATURE REVIEW

2.1. AS 3101

For nearly 80 years, the auditor's report did not have any significant changes until the enactment of PCAOB release no. 2017-001 (Wang & Lu., 2022). On June 1, 2017, the PCAOB issued AS 3101: The auditor's report on an audit of financial statements when the auditor expresses an unqualified opinion (2017). One of the earliest attempts to modify the auditor's report is the commission on auditors' responsibilities: report, conclusions and recommendations (Commission on Auditors' Responsibilities, 1978). The report has often been referred to as the "Cohen commission report." The first significant milestone on improving the quality of the auditor's reports is the PCAOB release no. 2011-003: Concept release on possible revisions to PCAOB standards related to reports on audited financial statements and related amendments to PCAOB standards notice of roundtable (2011). In this release, various alternative additions to the auditor's report are recommended. After addressing responses from outreach activities, the PCAOB issued release no. 2013-005: the auditor's report on an audit of financial statements when the auditor expresses an unqualified opinion; the auditor's responsibilities regarding other information in certain documents containing audited financial statements and the related auditor's report; and related amendments to PCAOB standards. This proposal expands the auditor's report to require the inclusion of critical audit matters. After receiving comments on the proposed standard, the PCAOB modified the various areas regarding source, definition, and communication requirements for critical audit matters, in a re-proposal (PCAOB, 2016) before issuing its final rule of AS 3101. This new standard has significantly expanded the auditor's report, requiring additional disclosures in the annual report. Auditors are required to report CAMs addressing areas that contain challenging, subjective, or complex auditor judgement. The new auditor's report will provide more meaningful and relevant information as well as transparent disclosures of a company's financial condition and performance (Jermakowicz et al., 2018). These new requirements had been phased in for accelerated filers with fiscal reporting years ended on or after June 30, 2019. The expanded auditor's report is currently required for all filers with fiscal reporting years ended on or after December 15, 2020 (PCAOB, 2017).

A CAM is a matter that is challenging, subjective or requires complex auditor judgement. These matters may alert the users of a company's annual report regarding areas that may involve significant audit risks. CAMs are topics that are communicated by the auditor with the company's management and its audit committee. Although the PCAOB does not prescribe any specific CAMs, it provides guidance for identifying a potential CAM with the following six factors:

1) The auditor's assessment of the risks of material misstatement, including significant risks;

2) The degree of auditor judgment related to areas in the financial statements that involved the application of significant judgment or estimation by management, including estimates with significant measurement uncertainty;
3) The nature and timing of significant unusual transactions and the extent of audit effort and judgment related to these transactions;
4) The degree of auditor subjectivity in applying audit procedures to address the matter or in evaluating the results of those procedures;
5) The nature and extent of audit effort required to address the matter, including the extent of specialized skill or knowledge needed or the nature of consultations outside the engagement team regarding the matter; and
6) The nature of audit evidence obtained regarding the matter (PCAOB, 2017, p. 22-23).

Using these factors suggested by the PCAOB, an auditor should design and/or adjust its audit procedures to identify and address any CAM. The presence of these factors alone or in combination with others would require reporting of a CAM. The PCAOB also expects that auditors will report at least one CAM in most audits. Where an auditor determines that there is no CAM to report, the PCAOB requires the following statement to be included in the "critical audit matters" section of the report of independent registered public accounting firm:

> "Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: 1) relate to accounts or disclosures that are material to the financial statements, and 2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters" (PCAOB, 2017, p. A1-10).

The new PCAOB standard is not required for audit engagements of brokers and dealers reporting under the exchange act rule 17a-5; investment companies other than business development companies; employee benefit plans (i.e. employee stock purchase, savings, and similar plans); and emerging growth companies ("EGCs"). However, auditors of these entities may choose to include critical audit matters in the auditor's report voluntarily (PCAOB, 2017).

For each critical audit matter communicated in the auditor's report the auditor must:

1) Identify the critical audit matter;
2) Describe the principal considerations that led the auditor to determine that the matter is a critical audit matter;
3) Describe how the critical audit matter was addressed in the audit; and

   Note: In describing how the critical audit matter was addressed in the audit, the auditor may describe: (a) the auditor's response or approach that was most relevant to the matter; (b) a brief overview of the audit procedures performed; (c) an indication of the outcome of the audit procedures; and (d) key observations with respect to the matter, or some combination of these elements.
4) Refer to the relevant financial statement accounts or disclosures that relate to the critical audit matter" (PCAOB, 2017, p. A1-8 to 9).

Besides reporting a CAM in a detailed narrative, the auditor must also describe how the CAM was addressed in the audit using any or a combination of: "1) the auditor's response or approach that was most relevant to the matter; 2) a brief overview of the audit procedures performed; 3) an indication of the outcome of the audit procedures; and 4) key observations with respect to the matter" (PCAOB, 2017, p. A1-9).

AS 3101 requires CAM reporting for public companies in different phases: 1) large accelerated filers with fiscal periods ended on or after June 30, 2019, and 2) all other filers on or after December 15, 2020 (PCAOB, 2017). Thus, auditors of all the public companies are now required to include CAM reporting in their reports of independent registered public accounting firm.

2.2. Boilerplate Practice

This section reviews the literature regarding the criticism of disclosures that resembles a "boilerplate" practice in CAM reporting where the narratives and/or audit procedures were virtually the same in both reporting years. In a public statement, former SEC chairperson Jay Clayton**,** specifically cautioned auditors that a CAM disclosure should not be implemented as if it is a "boilerplate" that would not address the specific audit risks and complexity of the period (PCAOB, 2017; Banham, 2018; Burns, 2019; and Fuller et al., 2021). Various commenters responded to the original proposal also "…stated that a requirement to describe all the considerations that led the auditor to determine that a matter is a critical audit matter could lead to a checklist approach, which could result in standardized or boilerplate language and diminish the value of critical audit matters." (PCAOB, 2016, p. 30).

Some researchers have addressed the problem of using a "boilerplate" practice when preparing the auditor's report. In a study of going concern reports to manufacturing companies, "flexible" reporting as opposed to "boilerplate" reporting provided the auditor with an "opportunity to better explain his or her assessment of the issue" (Carcello et al., 2003, p. 78). In a study on revising the audit report, 53 members of a focus group expressed their concern that an expanded audit report would merely add more "boilerplate" material (Gray et al., 2011). In a review of the literature on the auditor's report, the author finds that the auditor's disclosures provide symbolic value but no communicative value and warns "… that the inclusion of additional information may create a very lengthy auditor's report. Moreover, the wording may remain boilerplate" (Church et al., 2008, p. 81). The expanded auditor's report is an attempt to minimize the expectation gap between the investors and the auditors. This study also examines the materiality of auditor's disclosures (Houghton et al., 2011). In a study that uses two measurements of boilerplate disclosures in analyzing the SEC's reporting requirement that causes a stock to be speculative, contrary to previous studies, the authors also find that "boilerplate" disclosures actually benefit audit firms with favorable and judicial outcomes (Cazier et al., 2021). Christensen et al. (2019) find that binary audit reports do not effectively inform the investing public of the significant business risks, especially when the client experiences year-over-year changes. Arikan (2022) reports similar findings where nonprofessional investors make decisions that are more informed when they receive specific risk information rather than "boilerplate" disclosures. In a study based on survey responses from samples of MTurk workers, Vinson et al. (2019) find that the removal of a CAM in a subsequent year results in evaluators assessing more auditor negligence. This study closely relates to our primary objective of measuring the "boilerplate" practice in CAM reporting. Removing a CAM in a subsequent year would suggest the absence of a "boilerplate" practice.

Similar to CAMs, auditors of companies based in France since 2003 have been required to report justification of assessment (JOA) in their expanded audit reports. The results of an empirical study indicate that the JOAs do not provide any significant market reaction or impact on audit quality or audit fees. The authors also indicate that the use of "boilerplate" narratives might have been used in the JOA disclosures (Bédard et al., 2019). To improve the quality of the auditor's report in avoiding a "boilerplate" presentation and a "pass/fail" format, many standard setters, such as the United Kingdom's (UK) financial reporting council (FRC), have mandated the adoption of an expanded audit report with the addition of key audit matters (KAMs). In a study with a quasi-experiment of the benefits provided by the additional explanation in the auditor's report, the authors find improvement in financial reporting quality, higher perception of earnings quality, and fewer accounting restatements. The explanatory note provides a modification to the auditor's report and partially avoiding a "boilerplate" disclosure (Bens et al., 2019). In an empirical study, KAM disclosures have a limited effect on market reaction for companies in the Alternative Investment Market (AIM). The authors find no consistent evidence with the length of the auditor's report, the number of risks and materiality. The KAM disclosures have an insignificant impact on the information provided by small and high-risk AIM companies (Gutierrez et al., 2021). In a study of Chinese companies, the authors find that KAMs provide financial statement users with more communicative value. They find that KAM disclosures are often innocuous and follow a "boilerplate" pattern in order to avoid potential liability. They also fear that the CAMs as well as KAMs "might be filled with boilerplate, providing little if any information" (Zeng et al., 2021, p. 4). They classify KAM disclosures as either "industry-generic", or "firm [client]-specific". They find KAMs with specific language are correlated with higher audit quality and less client earnings management activities, whereas generic KAMs are associated with "boilerplate" reporting. Wang and Lu (2022) find that the quality and transparency of the financial reports are improved with the addition of KAM disclosures.

2.3. Studies Supporting CAM Disclosures

Various studies have indicated that CAM reporting has a significant influence on management and investor's decision-making process. In a research study using participants in a survey, the authors find "… that, in certain circumstances, disclosing CAMs could decrease the probability of auditor negligence verdicts by increasing jurors' perceptions of the foreseeability of certain types of misstatements. Further, we found that jurors are more likely to hold auditors liable for damages when the auditors explicitly stated that there were no CAMs, relative to when the auditors disclosed either a related or unrelated CAM" (Brasel et al., 2016, p. 7). In a review of five studies, Gimbar et al. (2016) find that CAM disclosures do not reduce the auditor's liability. The auditor's liability is increased where the CAM disclosure is on precise accounting standards that results in additional auditing procedures.

Numerous studies have reviewed the benefits of KAMs, which have been required by the International Auditing and Assurance Standards Board (IAASB) since 2014 (Jermakowicz et al., 2018). Sirois et al. (2018) find that users of financial statements pay more attention to disclosures that are addressed by KAMs. The users' focus decrease when there are multiple KAMs reported.

The accounting for income taxes is an important area in many audits. In an empirical study on CAMs with a focus on taxation, the authors compared the reporting of tax expenses of sampled companies in 2018 and 2019. The purpose is to identify whether CAM reporting on taxes makes a difference on tax expenses in the 2019 fiscal year in comparison to the 2018 fiscal year when there were no CAM reporting requirements by the PCAOB. The authors find that a CAM disclosure on taxes reduces management's utilization of tax expenses as an earnings management tool. In addition, they observed an increase in the tax allowance account when the auditor reports a CAM on taxes (Drake et al., 2020). In a follow-up study, the authors find that CAM disclosures on taxes reduce management's attempts to use taxes to induce favorable analysts' forecasts. They assert that there is no relationship between CAMs on tax disclosures and audit and non-audit fees (Drake et al., 2021). Tax assets with estimation uncertainty result in a higher probability of receiving a tax KAM. There is a higher chance that an auditor reports a tax KAM for clients with higher tax complexity (e.g. greater tax avoidance, headquartered in tax havens, etc.). They also find a strong inverse relationship between tax KAMs reported and the auditor's tax related services (Lynch et al., 2021). In a study of 96 Brazilian companies, CAM disclosures are found to be associated with earnings management and raise a red flag to the investor (Santos et al., 2020, p. 7). From a survey of nonprofessional investors, the authors find that study subjects are less likely to invest in a company where there is a CAM disclosure. The results of the study indicate that these disclosures are informative and value-adding to financial reporting. Thus, CAMs are perceived to have a positive effect on audit quality, but a detrimental effect on investment intentions (Rapley et al., 2021). Rousseau and Zehms (2020) find KAMs vary by the cognitive and expressive style of the audit partner on the client engagement but not on the audit firm's characteristics.

More significantly, Klevak et al. (2020) conducted an empirical study using Natural Language Processing (NLP) techniques in analyzing the sampled audit reports. Specifically, companies with more extensive CAM disclosures have significantly lower market returns than the ones with less extensive CAM disclosures. They find that the volatility of stock returns are more prevalent for companies with more extensive CAM disclosures. As for the investing community, the authors find that analysts have greater downward revisions of earnings forecasts for companies with more extensive CAM disclosures. Even during the Covid-19 pandemic with unprecedented economic uncertainty, management and analysts afforded sufficient time in preparing and analyzing CAM reporting. The aforementioned studies suggest that the PCAOB's objective of improving the transparency of financial reporting is achieved in various areas.

In an empirical study, the authors find that CAMs have a negative effect on investment judgements. CAMs that are categorized as "uncertain" as opposed to "complex" have a greater mitigating effect on the investors' negative evaluation (Akulinitsev et al., 2021). KAMs have a significant positive correlation with audit quality and a significant mediating effect on earnings management. These findings are based on an empirical study on all the industrial and service filers listed on the Amman Stock exchange (Alqam et al., 2021).

Another important reason why CAM reporting is necessary is that the disclosures may influence management's operating decisions, such as business expansions, or investment selections that involve balancing risks and rewards. For example, Bentley et al. (2021) conducted three separate experiments surveying 132 E.M.B.A. students. They find that management reduces risk-decreasing activities (e.g. derivatives, and loan issuances) with CAM disclosures. However, they do not find any evidence where CAM disclosures have any effect in reducing management's risk-increasing activities. In a study of companies listed on the Shanghai and Shenzhen stock exchanges, the authors find that CAM disclosures have a mitigating effect on stock price crashes (Zhi & Kang, 2021).

2.4. Studies on Limitations of CAM Disclosures

In contrast, various studies have reported that CAMs have limited effects on improving the quality of financial reporting. CAM disclosures result in a less readable audit report and do not provide additional information to investors in their valuation judgements. The CAMs also have a negative effect on the company's management even when the auditor issues an unqualified opinion (Carver & Trinkle, 2017). The presence of KAMs has also been associated with less skeptical auditor judgement in their performance where they agree to follow the client's treatment of accounting matters (Ratzinger-Sakel & Theis, 2017).

Gutierrez et al. (2018) conducted a study based on 338 nonfinancial companies out of the 728 filers listed on the London stock exchange. The authors find that the expanded auditor's report and the reporting of KAMs do not result in any effect on investors' reaction or improvement in audit quality. Levy (2018) suggests that auditors might report numerous CAMs in an effort to avoid potential liability and incur excessive costs. The author also opines that the disclosure of CAMs would not increase the transparency of the annual report and may diminish the value of the auditor's opinion.

Ozlanski (2019) observes mixed results on investor reactions to CAM reporting. The author finds a greater influence on investors' perception of management's credibility when the reported CAM is associated with precise accounting standards and/or guidance. This is not evident when the CAM is associated with imprecise standards and/or guidance. Similarly, Burke et al. (2021) find no significant relationship between CAM reporting and audit fees, and/or audit quality. They also find that CAMs do not significantly affect market reaction. This finding is consistent with various studies of KAM reporting for non-U.S. companies (Gutierrez et al., 2018, 2021; Bédard et al., 2019; Liao et al., 2019; and Coram & Wang, 2021). However, in another empirical study on qualitative data, the authors analyzed the textual information of CAM reports using Python to perform a difference-in-difference test. The results of the study indicate that management improves its disclosures in areas addressed by CAMs. In addition, they find that "unexpected CAM disclosures do provide incremental information to the market" (Burke et al., 2021, p. 34).

2.5. Research Question and Hypothesis Development

The primary objective of this project is to compare the CAMs reported in the auditor's report for the DOW 30 companies for the fiscal periods of 2019 and 2020 to identify whether the auditors practiced any "boilerplate" CAM reporting. In our view, there are two types of "boilerplate" practices in CAM reporting: "intra-firm" and "inter-firm". An "intra-firm boilerplate" CAM reporting occurs where the auditor reports the same CAM in the succeeding fiscal year without any significant modifications in the narratives describing the CAM and/or the audit procedures performed. An "inter-firm boilerplate" CAM reporting occurs where among various firms, the auditors follow the same style or a "model" of CAM reporting in describing the CAM and/or the audit procedures performed. In this research, we only focus on "intra-firm boilerplate" CAM reporting. We will examine the ramifications of "inter-firm boilerplate" CAM reporting using a larger set of random samples selected from all the SEC registrants in our next research project.

Our research question is whether auditors are applying an "intra-firm boilerplate" practice in their CAM reporting. To answer this research question, we have developed the following hypotheses:

Hypothesis 1_0: the auditors are not applying an "intra-firm boilerplate" practice in their CAM reporting where the disclosures are virtually identical for both years.

Hypothesis 1_A: the auditors are applying an "intra-firm boilerplate" practice in their CAM reporting where the disclosures are virtually identical for both years.

III. RESEARCH METHODOLOGY

3.1. Coding Scheme

The main contribution of this project is to determine whether auditors performed audit procedures, and reported CAMs in fiscal year 2020 with a fresh approach even if the same accounting issue was reported in fiscal year 2019. We retrieved the annual reports of the DOW 30 companies for the 2019 and 2020 fiscal years from the SEC's EDGAR database and summarized the CAMs reported by the auditors. To answer our research questions, we performed the following procedures:

1) We compared the CAMs to determine whether any CAMs were reported in fiscal year 2019 that were not addressed in fiscal year 2020? We interpret this as an audit decision where the facts and circumstances do not require the same attention the auditor expended in the previous year, and therefore the same CAM is no longer needed in the subsequent year.
2) We compared the CAMs to determine whether any new CAMs were reported in fiscal year 2020? This would suggest that the circumstances and accounting issues changed in fiscal year 2020, therefore, requiring the auditor's additional attention.
3) We compared the CAMs to determine whether CAMs that addressed the same accounting issues in fiscal years 2019 and 2020 were significantly modified in the subsequent year in the CAM narrative and/or the audit procedures employed.

In general, the auditors would first describe the objective and purpose of a CAM and then address each specific CAM in detail. The PCAOB provides a model description of a CAM in AS 3101 (PCAOB, 2017). Based on our review of the auditor's reports of the DOW 30 companies, that description has been adopted by all "big four" auditing firms (i.e., Deloitte, EY, KPMG, and PwC) virtually verbatim.

We designed an Excel template to capture the required data. In this template, we entered the ticker symbol of the company, the company name, the fiscal year, the description of the CAM (if more than three CAMs, they are concatenated under CAM 3), the total number of CAMs, and the name of the audit firm. We used this template to record the data for fiscal year 2019. We used a similar template for fiscal year 2020 with an additional column to identify and record the following information:

D_e – CAM eliminated,
D_n – New CAM,
S_m – Same CAMs with material differences,
S_w – Same CAMs without material differences, or "boilerplate" (PCAOB, 2017; Banham, 2018; Burns, 2019; Fuller et al., 2021), and
N/A – CAMs not required to be reported prior to June 30, 2019.

We will discuss the details of this procedure in the forthcoming "year-over-year comparison of CAMs" subsection of this paper.

3.2. Documentation of CAMS

For documentation purposes, we extracted the entire section of the report of independent registered public accounting firm. All CAMs can be located in the last section of this report. In addressing the specific CAMs, each of the "big four" auditing firms has developed its distinctive "style" in satisfying the requirements prescribed by the PCAOB. For example, after identifying a CAM (e.g., revenue recognition), 1) KPMG and PwC covered all the requirements within the same caption of "critical audit matters"; and

2) Deloitte and EY provided two sub-captions, "description of the matter" and "how we addressed the matter in our audit" to comply with the PCAOB requirements[1]. Both Deloitte and EY reported requirement 1) "identify the critical audit matter", 2) "describe the principal considerations that led the auditor to determine that the matter is a critical audit matter", and 3) "refer to the relevant financial statement accounts or disclosures that relate to the critical audit matter" under the first sub-caption. They both used the second sub-caption to cover requirement 4) "describe how the critical audit matter was addressed in the audit".

3.3. Data Collection and Analysis

In order to compare the CAM disclosures for the 2019 and 2020 fiscal years, we accessed the auditor's report for each of the DOW 30 companies from the 10-K filings in the SEC's Edgar database. As presented in Table 1 – data coding sheet (in the Appendix), we recorded each data point according to the procedures described in the coding scheme subsection above to classify each CAM reported in the auditor's report. To achieve maximum accuracy, the CAMs were coded independently by each author to obtain the benefit of a "double blind review". Prior to finalizing all the codes, the authors compared each other's codes and resolved any discrepancies.

As for the empirical data, we selected the DOW 30 companies for this project because they all have the financial and human resources in working with the best auditors available to satisfy the PCAOB's CAM reporting requirements. The "big four" accounting firms audited all the DOW 30 companies. Although three companies were replaced at the time we conducted this project, we used the 2019 list for the purpose of a meaningful comparison. Specifically, Amegen, Honeywell and Salesforce replaced Exxon Mobile, Pfizer and Raytheon, respectively, in 2020.

IV. RESULTS AND DISCUSSIONS

4.1. Year-Over-Year Comparison of CAMS

The four specific PCAOB requirements in addressing a CAM are reported in the second section within the CAM report. As discussed earlier, auditors either report all these requirements in one subsection without any captions, such as KPMG and PwC, or in two subsections with captions, such as Deloitte and EY. As an example, we examined a CAM reported in both fiscal years 2019 and 2020 with significant different narratives and/or audit procedures.

The auditor of Apple Inc., EY, reported the same accounting issue for fiscal years 2019 and 2020 with significantly different narratives and/or audit procedures. We coded this CAM as S_m in our datasheet. EY reported the same CAM on "uncertain tax positions" for fiscal years 2019 and 2020 for Apple Inc. Although the number of words were almost identical (328 vs. 320), the description of the 2020 CAM was significantly different in comparison to fiscal year 2019. Specifically, in fiscal year 2019, among other items, the auditor's assessment of its client's tax position referenced the CAM to a European commission ruling. In fiscal year 2020, EY referenced the CAM to its client's assumptions and analysis.

In contrast, Microsoft corporation is an example where the auditors (Deloitte) reported the same accounting issue for fiscal years 2019 and 2020 without significantly different narratives and/or audit procedures (334 vs. 329 words). Deloitte described Microsoft's tax position in fiscal years 2019 and 2020 with virtually the same reportage.

[1] Refer to page 7 for the original list of the PCAOB requirements.

This would be an example of an "intra-firm boilerplate" practice of CAM reporting, and it was coded as S_w in our datasheet (see Table 1 in the Appendix).

In order to run a binomial test in SPSS, we transformed our data in Table 1 located in the appendix into the required binary format before importing the data into the statistical program. Table 2 presents the descriptive statistics of all the variables. There are 106 CAMs[2]. Since the data is binary, by definition, the maximum data range is "1" and the minimum is "0".

Table 2
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAM	106	1	1	1.00	.000
D_e	106	0	1	.12	.318
D_n	106	0	1	.14	.318
S_m	106	0	1	.16	.369
S_w	106	0	1	.22	.414
NA	106	0	1	.40	.491
Valid N (listwise)	106				

Table 3 summarizes the binomial results of the statistical test. The first variable summarized is "CAM" which is the total CAMs collected. The second variable is "D_e" which is a CAM in a specific category that is reported in fiscal year 2019 but not in fiscal year 2020. The third variable is "D_n" which is a CAM in a specific category that is reported in fiscal year 2020 but not in fiscal year 2019. The fourth variable is "S_m" which is a CAM in a specific category that is reported in both fiscal years 2019 and 2020 with significant modifications. The fifth variable is "S_w" which is a CAM of a specific category that is reported in fiscal years 2019 and 2020 without any significant modifications. The last variable is "NA"[3], which is a CAM reported in fiscal year 2019 where no comparison could be made to a prior year, because CAM reporting was not required prior June 30, 2019.

In analyzing these 106 data points of these binomial test reports, there are 13 CAMs (D_e) or 12% reported in fiscal year 2019 but not reported in fiscal year 2020. There are 15 "new" CAMs (D_n) or 14% reported in 2020 that are not reported in fiscal year 2019. The auditors reported 15 CAMs (S_m) or 14% in fiscal year 2020 in comparison to fiscal year 2019. Conversely, the CAMs that are classified as S_w amounted to 22 or 21%. Finally, there are 41 "NA" data points or 39%, which are the CAMs that could not be compared to a prior year.

4.2. Findings of the Study

For the purpose of identifying "intra-firm boilerplate" CAM reporting, we compared the CAMs reported by the auditors of the DOW 30 companies between fiscal years 2019 and 2020. The results of our study indicate that most of the CAMs were either new issues in fiscal year 2020 that were not reported in the fiscal year 2019 or were significantly modified. Specifically, the CAMs that are classified as D_e (13), D_n (9)[4], S_m

[2] Although there are 106 data points, Home Depot, Nike and Walmart were not required to report CAMs for fiscal year 2019 because their fiscal years ended before the implementation date of June 30, 2019.

[3] We use NA in lieu of N/A, because a forward slash is an illegal character in SPSS.

[4] Although there were 15 "new" CAMs (D_n), we adjusted the sub-total to 9, because three were reported by Home Depot, Nike and Walmart who were not required to report CAMs for fiscal year 2019. The reason was that their fiscal year ended before the implementation date of June 30, 2019.

(15) and S_w (22) comprised 59 CAMs. The results indicate that 63% [(13+9+15)/59] of the CAMS, did not simply repeat the same narratives and/or audit procedures used in the previous year. This type of CAM reporting would appear to have accomplished the PCAOB's objective of avoiding a "boilerplate" practice. The CAMs without significant modification (22 out of 59) represent 37% of the 59 total CAMs that did not satisfy the PCAOB's guidance.

Table 3
Binomial Test Results

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
CAM	Group 1	1	106	1.00	.50	.000
	Total		106	1.00		
D_e	Group 1	0	93	.88	.50	.000
	Group 2	1	13	.12		
	Total		106	1.00		
D_n	Group 1	0	91	.86	.50	.000
	Group 2	1	15	.14		
	Total		106	1.00		
S_m	Group 1	0	91	.86	.50	.000
	Group 2	1	15	.14		
	Total		106	1.00		
S_w	Group 1	0	84	.79	.50	.000
	Group 2	1	22	.21		
	Total		106	1.00		
NA	Group 1	1	41	.39	.50	.041
	Group 2	0	65	.61		
	Total		106	1.00		

To take a more meaningful look of the "intra-firm boilerplate" CAM reporting, there are 37 (15 S_m and 22 S_w) CAMs that addressed the same accounting issues in fiscal years 2019 and 2020. The auditors reported 22 S_w CAMs or 59% (22/37) without any significant modifications from how they were reported in the previous year. The reporting of these CAMs suggests that the auditors followed an "intra-firm boilerplate" practice as if they were copied from a template. Thus, the null hypothesis that the auditors are not applying an "intra-firm boilerplate" practice in their CAM reporting where the disclosures are virtually identical for both years is rejected. The alternative hypothesis that the auditors are applying an "intra-firm boilerplate" practice in their CAM reporting where the disclosures are virtually identical for both years is supported. As a result, the answer to our research question is that there exists an "intra-firm boilerplate" practice in CAM reporting for the DOW 30 companies.

V. CONCLUSION

The primary objective of this project is to determine whether the CAMs reported by the public accounting firms have achieved the PCAOB's goal of providing a more informative and relevant disclosure to investors and other financial statement users in issuing its new standard of AS 3101 (PCAOB, 2017). We reviewed the CAMs reported by the auditors of the DOW 30 companies to determine whether auditors of these companies provided additional information or merely followed a routine approach where there were few distinctions between the two-year reporting periods. Where the auditors report the same CAM in the succeeding fiscal year without any significant modifications in the narratives describing the CAM and/or the audit procedures performed, we categorized these CAMs as an "intra-firm boilerplate" practice. It is our position that in most cases, even where a CAM addresses the same accounting issue in a subsequent year, the facts and circumstances should result in some modification in the narratives describing the CAM and/or the audit procedures performed (PCAOB, 2013).

We collected our empirical data directly from the SEC's EDGAR database. Every CAM was analyzed with a year-over-year comparison of the narratives reported by the auditors and coded into a data sheet. We converted this qualitative data set into the required binary format to run the binomial test. The results of our study indicate that most of the CAMs were either in areas that addressed new issues in fiscal year 2020 that were not reported in the fiscal year 2019, or were significantly modified. However, we found 22 out of 59 CAMs, or 37% were reported on the same auditing issues with virtually the same narratives and/or auditing procedures for both fiscal years. This was characterized as "intra-firm boilerplate" CAM reporting. Specifically, the most concerning findings of our study is that for the CAMs addressing the same accounting issues, 59% are "boilerplate".

The main contribution of our study is to test the empirical evidence regarding the former SEC chairperson, Jay Clayton's concern on "boilerplate" type of CAM reporting (SEC, 2017). To our knowledge, most of the literature on CAMs have focused on the information value for a particular fiscal year or the effects CAMs have on other areas of interest such as earnings management using multiple reporting years. This study is the first to compare the CAMs for a two-year period, particularly on "intra-firm boilerplate" CAM reporting. Our study provides empirical evidence that supports the concerns of Jay Clayton and other researchers on "boilerplate" CAM reporting (SEC, 2017; Banham, 2018; Burns, 2019; and Fuller et al., 2021).

It must be noted that there are two limitations to this study: 1) the DOW 30 companies are not good representatives of all the SEC registrants; therefore, the findings of this study should not be generalized, and 2) there may be situations where the facts and circumstances would justify using the same reporting of a CAM for the two-year period.

We are currently in the process of conducting an expanded study utilizing Python's natural language processing (NLP) capability on a larger set of empirical samples from all the publicly listed companies in the United States. We will be using analytics techniques, such as TF-IDF and Cosine-similarity to analyze the qualitative data. We also plan to examine the problem of "inter-firm boilerplate" CAM reporting in a future study.

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Appendix
Table 1
Data Coding Sheet

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
MMM	3M Co.	2019	Legal proceedings conti-ngencies	NA	
MMM	3M Co.	2019	Valuation of acelity inc. intangible assets	D_e	
MMM	3M Co.	2020	Legal proceedings conti-ngencies	S_w	327/336
AXP	American Express Co.	2019	Membership rewards liabi-lity - ultimate redemption rate	NA	
AXP	American Express Co.	2019	Reserves for losses on card member loans-qualitative reserve component	NA	
AXP	American Express Co.	2020	Reserves for credit losses on card member loans	S_m	397/365
AXP	American Express Co.	2020	Membership rewards liabi-lity	S_m	582/412
AAPL	Apple Inc.	2019	European commission state aid matter uncertain tax position	NA	
AAPL	Apple Inc.	2020	Uncertain tax positions	S_m	320/328

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
BA	Boeing Co.	2019	Cost estimates for fixed - price development contracts	NA	
BA	Boeing Co.	2019	Program accounting estimates for new programs	NA	
BA	Boeing Co.	2019	Liabilities related to the 737 MAX grounding	NA	
BA	Boeing Co.	2020	Cost estimates for fixed-price development contracts	S_w	445/387
BA	Boeing Co.	2020	Program accounting estimates for the 777X program	S_m	397/327
BA	Boeing Co.	2020	Liabilities related to the 737 MAX grounding	S_m	585/569
BA	Boeing Co.	2020	Income taxes – realizability of deferred tax assets	D_n	
CAT	Caterpillar Inc.	2019	Uncertain tax position - caterpillar SARL IRS examination	D_e	
CAT	Caterpillar Inc.	2020	Customer finance receivables allowance for credit losses	D_n	
CVX	Chevron Corp.	2019	The impact of crude oil and natural gas reserves and other factors on upstream property, plant, and equipment, net	NA	
CVX	Chevron Corp.	2020	The impact of proved crude oil and natural gas reserves on upstream property, plant, and equipment, net	S_m	429/657
CVX	Chevron Corp.	2020	Acquisition of noble energy, inc. - valuation of crude oil and natural gas properties	D_n	
CSCO	Cisco Systems Inc.	2019	Revenue recognition - identification of contractual terms in certain customer arrangements	NA	
CSCO	Cisco Systems Inc.	2020	Revenue recognition - identification of contractual terms in certain customer arrangements	S_w	Same mistake
KO	Coca-Cola Co.	2019	Accounting for uncertain tax positions	NA	
KO	Coca-Cola Co.	2019	Valuation of trademarks with indefinite lives and goodwill	NA	

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
KO	Coca-Cola Co.	2020	Accounting for uncertain tax positions	S_m	460/397
KO	Coca-Cola Co.	2020	Valuation of trademarks with indefinite lives and goodwill	S_w	405/405
DOW	Dow Inc.	2019	Goodwill - coatings and performance monomers reporting unit	D_e	
DOW	Dow Inc.	2019	Other-than-temporary - impairment (“OTTI”) of the Sadara chemical company (“Sadara”) equity method investment	D_e	
DOW	Dow Inc.	2020	Goodwill - annual impairment assessment	S_m> D_n	689/599
XOM	Exxon Mobil Corp.	2019	The impact of proved oil and natural gas reserves on upstream property, plant and equipment, net	NA	
XOM	Exxon Mobil Corp.	2020	The impact of proved oil and natural gas reserves on upstream property, plant and equipment, net	S_m	479/497
XOM	Exxon Mobil Corp.	2020	Impairment assessment of certain upstream property, plant and equipment, net	D_n	
GS	Goldman Sachs Group Inc.	2019	Valuation of certain level 3 financial instruments	NA	
GS	Goldman Sachs Group Inc.	2019	Provision for losses that May arise from litigation and regulatory proceedings related to 1Malaysia development berhad	D_e	
GS	Goldman Sachs Group Inc.	2020	Valuation of certain level 3 financial instruments	S_w	383/378
GS	Goldman Sachs Group Inc.	2020	Allowance for loan losses - wholesale loan portfolio	D_n	
HD	Home Depot Inc.	2019		NA	
HD	Home Depot Inc.	2020	Evaluation of the self-insurance liability	D_n *	
HD	Home Depot Inc.	2020	Evaluation of gross unrecognized income tax benefits	D_n *	
INTC	Intel Corp.	2019	Inventory valuation	NA	
INTC	Intel Corp.	2020	Inventory valuation	S_w	397/380
IBM	International Business Machines Corp.	2019	Acquisition of red hat, inc. - valuation of intangible assets acquired	D_e	

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
IBM	International Business Machines Corp.	2019	Income taxes – uncertain tax positions	NA	
IBM	International Business Machines Corp.	2020	Income taxes – uncertain tax positions	S_w	501/527
JNJ	Johnson & Johnson	2019	U.S. pharmaceutical rebate reserves - managed care, medicare and medicaid	NA	
JNJ	Johnson & Johnson	2019	Litigation contingencies - talc	NA	
JNJ	Johnson & Johnson	2019	Litigation – opioids	NA	
JNJ	Johnson & Johnson	2020	U.S. pharmaceutical rebate reserves - managed care, medicare and medicaid	S_w	370/371
JNJ	Johnson & Johnson	2020	Litigation contingencies – talc	S_m	642/444
JNJ	Johnson & Johnson	2020	Litigation – opioids	S_m	644/576
JPM	JPMorgan Chase & Co.	2019	Fair value of certain level 3 financial instruments	NA	
JPM	JPMorgan Chase & Co.	2019	Fair value of mortgage servicing rights assets	D_e	
JPM	JPMorgan Chase & Co.	2019	Allowance for loan losses - wholesale loan, credit card loan and consumer loan portfolios	NA	
JPM	JPMorgan Chase & Co.	2020	Allowance for loan losses – portfolio-based component of wholesale loan and credit card loan portfolios	S_m	559/479
JPM	JPMorgan Chase & Co.	2020	Fair value of certain level 3 financial instruments	S_w	356/350
MCD	McDonald’s Corp.	2019	Unrecognized tax benefits	NA	
MCD	McDonald’s Corp.	2020	Unrecognized tax benefits	S_w	383/383
MRK	Merck & Co Inc.	2019	Customer discount accruals in the U.S. - medicaid, managed care and medicare part D rebates	NA	
MRK	Merck & Co Inc.	2020	Customer discount cccruals in the U.S. - medicaid, managed care and medicare part D rebates	S_w	447/441
MSFT	Microsoft Corp.	2019	Revenue recognition	NA	
MSFT	Microsoft Corp.	2019	Income taxes - uncertain tax positions	NA	

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
MSFT	Microsoft Corp.	2020	Revenue recognition	S_w	389/417
MSFT	Microsoft Corp.	2020	Income taxes - uncertain tax positions	S_w	329/334
NKE	Nike Inc.	2019		NA	
NKE	Nike Inc.	2020	Accounting for income taxes	D_n *	
PFE	Pfizer Inc.	2019	Evaluation of certain assumptions impacting the U.S. medicare, medicaid, and performance-based contract rebates accrual	NA	
PFE	Pfizer Inc.	2019	Evaluation of gross unrecognized tax benefits	NA	
PFE	Pfizer Inc.	2019	Evaluation of product and other product-related litigation	NA	
PFE	Pfizer Inc.	2020	Evaluation of certain assumptions impacting the U.S. medicare, medicaid, and performance-based contract rebates accrual	S_w	241/259
PFE	Pfizer Inc.	2020	Evaluation of gross unrecognized tax benefits	S_w	291/277
PFE	Pfizer Inc.	2020	Evaluation of product and other product-related litigation	S_w	288/285
PG	Procter & Gamble Co.	2019	Goodwill and intangible assets - shave care goodwill and gillette indefinite lived intangible asset	NA	
PG	Procter & Gamble Co.	2019	Acquisition of the over the counter healthcare business of Merck	D_e	
PG	Procter & Gamble Co.	2020	Goodwill and intangible assets	S_m	604/514
RTX	Raytheon Technologies Corp.	2019	Revenue recognition - estimated costs at completion for certain long-term aerospace aftermarket service contracts	NA	
RTX	Raytheon Technologies Corp.	2019	Goodwill and intangible assets quantitative impairment assessments	NA	
RTX	Raytheon Technologies Corp.	2020	Valuation of acquired customer relationship and tradename intangible assets	D_n	
RTX	Raytheon Technologies Corp.	2020	Tax-free determinations of certain internal separation transactions	D_n	

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
RTX	Raytheon Technologies Corp.	2020	Revenue recognition - contract estimates at completion	S_m	674/404
RTX	Raytheon Technologies Corp.	2020	Certain goodwill and unamortized intangible assets impairment assessments	S_m	609/497
TRV	Travelers Companies Inc.	2019	Evaluation of the estimate of claims and claim adjustment expense reserves	NA	
TRV	Travelers Companies Inc.	2020	claim adjustment expense reserves	S_w	330/320
UNH	UnitedHealth Group Inc.	2019	Incurred but not reported	NA	
UNH	UnitedHealth Group Inc.	2019	Goodwill	NA	
UNH	UnitedHealth Group Inc.	2020	Incurred but not reported (IBNR) claim liability	S_w	350/349
UNH	UnitedHealth Group Inc.	2020	Goodwill	S_m	476/419
VZ	Verizon Communications Inc.	2019	Impairment evaluation for wireline goodwill	D_e	
VZ	Verizon Communications Inc.	2019	Valuation of employee benefit obligations description of the matter	NA	
VZ	Verizon Communications Inc.	2019	Income taxes – benefit from the disposition of stock of a foreign affiliate	D_e	
VZ	Verizon Communications Inc.	2020	Valuation of employee benefit obligations	S_w	420/425
V	Visa Inc.	2019	Assessment of the accrued litigation liability for class members opting out of the damages class settlement	NA	
V	Visa Inc.	2019	Evaluation of the revenue recognition for incentive arrangements with certain strategic partners upon adoption of ASC topic 606	D_e	
V	Visa Inc.	2020	Accrued litigation liability for class members opting out of the damages class settlement in the interchange multidistrict litigation (MDL)	S_w	377/367

To be continued Table 1.

Ticker Symbol	Company Name	Fiscal Year	Brief CAM Description	YoY Code	YoY Comparison
WBA	Walgreens Boots Alliance Inc.	2019	Goodwill and indefinite - lived intangible assets Impairment evaluation - boots reporting unit and boots indefinite - lived intangible assets	NA	
WBA	Walgreens Boots Alliance Inc.	2019	Income taxes - uncertain tax positions	NA	
WBA	Walgreens Boots Alliance Inc.	2020	Goodwill and indefinite - lived intangible assets impairment evaluation	S_w	708/686
WBA	Walgreens Boots Alliance Inc.	2020	Income taxes - uncertain tax positions	S_w	391/390
WMT	Walmart Inc.	2019	Contingencies	NA	
WMT	Walmart Inc.	2019	Valuation of indefinite-lived intangible assets	NA	
WMT	Walmart Inc.	2020	Contingencies	D_n *	430/349
WMT	Walmart Inc.	2020	Valuation of indefinite-lived intangible assets	D_n^*	300/292
DIS	Walt Disney Co.	2019	Valuation of intangible assets and film and television costs	D_e	
DIS	Walt Disney Co.	2019	Unrecognized tax benefits	D_e	
DIS	Walt Disney Co.	2020	Goodwill - interim impairment assessment for international channels reporting unit	D_n	
DIS	Walt Disney Co.	2020	Amortization of produced content cost - predominantly monetized as a group	D_n	

YoY Code	Description
$\mathbf{D_e}$	CAM eliminated
$\mathbf{D_n}$	New CAM
$\mathbf{S_m}$	CAM-significant Diff.
$\mathbf{S_w}$	CAM-W/O significant Diff.
N/A	Not required in 2019

Notes: D_n^* -- the company was not required to report CAMs for fiscal year 2019, because their fiscal year ended before the implementation date of June 30, 2019.