Have Critical Audit Matter Disclosures Indirectly Benefitted Investors by Constraining Earnings Management? Evidence from Tax Accounts

Katharine D. Drake [a]
Nathan C. Goldman [b]
Stephen J. Lusch [c]
Jaime J. Schmidt [d]

[a] University of Arizona
[b] North Carolina State University
[c] Texas Christian University
[d] University of Texas at Austin

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ABSTRACT: Prior research indicates that expanded audit reports, which disclose financial statement matters that involved especially challenging, subjective, or complex auditor judgment (known as critical audit matters [CAMs] in the U.S.), have fallen short of their objective to provide investors with useful information. In this study, we investigate whether the disclosure of tax-related CAMs *indirectly* benefits investors by constraining tax-related earnings management. Such a finding would indicate that CAM disclosure has increased auditor and/or management scrutiny of the underlying financial statement areas. We find that tax-related CAM disclosures are associated with (1) a lower likelihood that the audited company uses tax expense to meet analysts' consensus forecasts, and (2) increases in the reported reserve for prior-period unrecognized tax benefits (UTBs). Our findings should assist the Public Company Accounting Oversight Board (PCAOB) with their post-implementation review of the new U.S. auditor reporting requirement.

Keywords: Critical audit matters, Earnings management, Tax expense, Unrecognized tax benefits

I. INTRODUCTION

In an effort to make audit reports more informative to investors, the U.S. Public Company Accounting Oversight Board (PCAOB) recently passed a new audit reporting standard that requires auditors to disclose areas of the audit that involved especially challenging, subjective, or complex auditor judgment—known as critical audit matters (CAMs) (PCAOB 2017). However, the Council of Institutional Investors reports that CAM disclosures issued during the first year of the new standard are not as informative as many investors had hoped (CII 2019). Prior and concurrent academic research largely confirms this conclusion, documenting that expanded audit reports in the U.S. and other countries are either uninformative to investors or only informative under certain conditions (e.g., Files and Gencer 2020; Gutierrez, Minutti-Meza, Tatum, and Vulcheva 2018; Köhler, Ratzinger-Sakel, and Theis 2020). Although the new audit reporting standard was only intended to increase auditor disclosure, the PCAOB noted that it could lead auditors and managers to more closely scrutinize the underlying matters identified as CAMs (PCAOB 2017). In this study, we explore such possibility by investigating whether tax-related CAMs *indirectly* benefitted investors by resulting in less tax-related earnings management.[1]

We focus on tax-related CAMs for several reasons. First, tax-related CAMs are frequent; more than 15 percent of our sample companies have one or more tax-related CAM. Second, tax disclosures provide details about tax accounts, allowing for comparison of the CAM-related accounts across companies and across time. Finally, the prior literature documents that the

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[1] We borrow the notion of *indirect* benefits to investors from the PCAOB who expect benefits in the form of increased auditor scrutiny or management focus on the matters identified as CAMs (PCAOB 2017). Furthermore, the literature is mixed on the harmful outcomes of earnings management (e.g., Lo 2008), but we anticipate that scrutiny over specific accounts may reduce opportunities for using those accounts to manage earnings.

complexities of tax reporting provide management with opportunities to manage earnings (e.g., Phillips, Pincus, and Rego 2003; Dhaliwal, Gleason, and Mills 2004; Gupta, Laux, and Lynch 2016). Finding that auditor disclosure of tax-related CAMs is associated with less tax-related earnings management would suggest that the new auditor reporting standard has indirectly benefited investors via more conservative accounting. In particular, we examine whether there is a decreased likelihood that companies with disclosed tax-related CAMs use tax expense to meet analysts' forecast in the post-CAM disclosure period relative to the pre-CAM disclosure period. Next, using the model in Dhaliwal et al. (2004), we examine the association between tax-related CAM disclosures and companies' changes in ETRs from the third to the fourth quarter to meet analyst forecast targets. Dhaliwal et al. (2004) argue that "the combination of judgment in estimating reserves and complex tax rules makes it difficult for financial statement users to evaluate managers' discretionary accruals for tax expense" (435). The information asymmetry between managers and investors, as well as the quarterly reporting of ETRs allows for management to use the ETR to meet earnings targets.

To examine our research question, we gather the CAM disclosures of all large-accelerated filers available as of March 19, 2020.[2] As 2019 is the first fiscal year in which auditors of large-accelerated filers are required to disclose CAMs, we construct a two-year sample that includes fiscal years 2018 (i.e., the year prior to CAM reporting) and 2019 (i.e., the first year of CAM reporting) for such filers. We then separate companies into those with a tax-related CAM reported for the fiscal year 2019 and those without.[3] We begin with univariate

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[2] We focus on large-accelerated filers because they were the only companies subject to CAM disclosure requirements for fiscal-year ends beginning June 30, 2019. In robustness tests, we include all companies and document similar inferences. Additionally, we wanted to avoid any pandemic-related time period effects from tainting our results; thus, we end our sample collection on March 19, 2020 given that most COVID-19 "stay-at-home" orders were in place on or near the end of March 2020.

[3] We eliminate 119 large-accelerated filers without a CAM disclosure as the PCAOB expected each company to have at least one CAM. We include these companies in a sensitivity test in Section V.

analysis that examines whether companies with tax-related CAMs are less likely to use tax expense to meet analysts' earnings forecasts in the post-CAM disclosure period than in the pre-CAM period. Similar to Gupta et al. (2016) we examine whether companies miss earnings forecasts using unmanaged (i.e., analyst-forecasted) tax expense, but meet after-tax earnings forecasts. We compare companies with and without tax-related CAMs in the pre- and post-CAM periods. We find a significance decrease in the likelihood that companies with one or more tax-related CAM use tax expense to meet analyst earnings forecasts in the post-CAM period but fail to find a similar change among companies without a tax-related CAM.

Next, using a sample of 756 company-year observations, we examine whether the presence of one or more tax-related CAM disclosures is associated with a decrease in the use of fourth-quarter ETRs to meet analysts' forecasts. We find evidence that companies with one or more tax-related CAMs appear to use fourth-quarter ETRs for earnings management in 2018, but after the disclosure of a tax-related CAM, these companies no longer use fourth-quarter ETRs to meet analysts' forecasts. By contrast, we find that companies without a tax CAM are less likely to use fourth-quarter ETRs to meet analysts' forecasts during the pre-CAM period; however, we find evidence that these companies engage in tax-related earnings management in the post-CAM period. In other words, we find that there is a significant reduction in the use of last-change earnings management among companies with a tax-related CAM relative to companies without a tax-related CAM.

In our additional analysis, we examine how the disclosure of tax-related CAMs affects the reporting of unrecognized tax benefits (UTBs). FIN No. 48, *Accounting for Uncertainty in Income Taxes* (FIN 48)[4] requires companies to estimate, record, and disclose a contingent

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[4] Now codified as ASC 740-10.

liability for unrecognized tax benefits in their financial statements when management determines that the likelihood of sustaining a tax position following a tax authority audit falls below the "more-likely-than-not" threshold. The judgment involved in this threshold provides managers with discretion to maximize recognized tax benefits (Cazier, Rego, Tian, and Wilson 2015; Gupta et al. 2016). FIN 48 is a complex standard (Graham, Raedy, and Shackelford 2012) that involves considerable subjectivity; thus, we expect that disclosure of a tax-related CAM by a company's auditor may result in changes to reported UTBs. Furthermore, recent literature documents variation in reporting under FIN 48, suggesting that complex transactions and managerial discretion lead to divergent reporting, even for the same tax issue and within the same audit firm (De Simone, Robinson, and Stomberg 2014). The complexities and managerial discretion involved in estimating UTBs make them an ideal setting to test whether CAM disclosure affects financial reporting.

To investigate whether CAM disclosures affect the financial reporting of UTBs for our sample of large-accelerated filers, we obtain the UTB balances for fiscal years 2018 (prior to the CAM reporting requirement) and 2019 (following the CAM reporting requirement). We find that tax-related CAM disclosures are associated with revisions to the UTB liability related to prior-period tax positions. Following Drake, Goldman, and Lusch (2016), we interpret the revisions related to prior-period tax positions as evidence of a change in estimate, plausibly related to auditor or management scrutiny of the accounts underlying the CAM disclosure.

Our study responds to the PCAOB's call for information on the costs, benefits, or unintended consequences of the implementation of CAMs in the U.S. (PCAOB 2020). While we are unable to quantify the costs of expanded audit reports in the U.S., we are able to document a benefit of CAMs to investors via less tax-related earnings management. We also contribute to the

prior literature that examines the outcomes of expanded audit reports. Prior research provides mixed evidence on whether expanded audit reports improve financial reporting quality and/or reduce earnings management. For example, some studies document that expanded audit reports are associated with improvements in financial reporting quality and reductions in earnings management (e.g., Reid, Carcello, Li, and Neal 2019; Santos, Guerra, Antonio, and Junior 2020) while other studies indicate no effect (Gutierrez et al. 2018; Bédard, Gonthier-Besacier, and Schatt 2019; Liao, Minutti-Meza, Zhang, and Zou 2019; Burke, Hoitash, Hoitash, and Xiao 2020), or only an effect in certain situations (Klueber, Gold, and Pott 2018). Due to variation in the content of CAMs and how they map into financial reporting quality and earnings management, studies that focus on a pooled sample of all CAMs are limited in their ability to directly infer an association between expanded audit report risk disclosures and changes in reporting. By focusing on *one particular* account and the *related* auditor disclosures, we are able to *more directly* test the financial reporting outcomes associated with expanded audit reports.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

The New Audit Reporting Standard

The audit report communicates to investors the auditor's opinion as to whether the financial statements are presented fairly, in all material respects, in accordance with the U.S. generally accepted accounting standards (PCAOB 2017). Historically, the majority of audit opinions are unqualified, stating that with reasonable assurance the financial statements are free from material misstatement (Lennox 2005). The historical audit report has been criticized for the uniformity of the auditor's opinion and its standardized language (PCAOB 2017). In response to investors' requests for additional auditor disclosures, standard-setters and regulators worldwide have implemented an expanded audit reporting model intended to provide investors with more

information about the audit and related financial statements (e.g., Financial Reporting Council 2013; IAASB 2015; PCAOB 2017).

In the U.S., the new audit reporting standard requires auditors to disclose the financial statement matters that required especially challenging, subjective, or complex auditor judgment, known as critical audit matters (CAMs). Effective for large-accelerated filers with fiscal years ending on or after June 30, 2019, the PCAOB states that "the purpose of critical audit matters (CAMs) is to provide audit-specific information that is meaningful to investors and other financial statement users" (PCAOB 2019, 1). We provide an example audit report that includes CAM disclosures in Appendix A. The Council of Institutional Investors (CII) recently examined the CAM disclosures during the first year of the new standard and concluded that they are not as informative as many investors had hoped (CII 2019).

Prior and concurrent academic research examining the informativeness of expanded audit reports largely confirms the CII's conclusion. In particular, Files and Gencer (2020) fail to find any statistically significant price or volume response to the earliest U.S. auditor CAM disclosures, suggesting that expanded U.S. audit reports for large-accelerated filers do not communicate incremental information to investors. Gutierrez et al. (2018) examine the information content of the U.K.'s expanded audit reporting model and find that the new U.K. auditor disclosures did not result in a significant market reaction. Similarly, Lennox, Schmidt, and Thompson (2019) document that investors in U.K. companies did not find expanded auditor disclosures incrementally informative, likely because many of the risks were already disclosed by management. Similarly, Liao et al. (2019) do not find expanded audit reports in Hong Kong to be informative to investors, and Bédard et al. (2019) do not find expanded audit reports in France to be informative to investors.

Some experimental studies find that expanded audit reports are informative to investors under certain circumstances. For example, Köhler et al. (2020) find that the disclosure of "key audit matters" (KAMs) (i.e., the International Auditing and Assurance Standard Board's version of CAMs) can be informative to professional (but not unprofessional) investors when the KAM disclosure relates to small changes in key assumptions underlying a financial statement estimate. Christensen, Glover, and Wolfe (2014) and Rapley, Robertson, and Smith (2018) find that CAM disclosures decrease nonprofessionals' willingness to invest in a company. Kachelmeier, Rimkus, Schmidt, and Valentine (2020) find that investors have less confidence in financial statement areas identified as CAMs by auditors. By contrast, Boolaky and Quick (2016) find that KAM disclosures have no effect on bank directors' perceptions of financial reporting quality. Similarly, Carver and Trinkle (2017) find that CAM disclosures do not inform investors' valuation judgments despite an improvement in the readability of the audit report. Unlike archival studies, experimental studies are limited in that they are unable to examine whether auditor CAM disclosures provide investors with *new* information above and beyond other sources of external information, which are often excluded from the studies.

The mixed evidence in the literature suggests that expanded audit reports may have fallen short of their intended objective to make the auditor's report more informative and relevant to investors. However, the PCAOB notes several potential alternative *indirect* benefits of expanded audit reporting. First, auditors may increase scrutiny on matters identified as CAMS by applying higher levels of professional skepticism or increasing the amount of substantive audit procedures applied to areas identified as CAMs (ACCA 2018).[5] Increased auditor focus on CAM disclosed

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[5] The evidence on whether the expanded disclosures affect audit effort measured by audit fees is mixed. While Chen, Nelson, Wang, and Yu (2020) find that audit fees increase in the complexity of KAM disclosures in Hong Kong, Gutierrez et al. (2018) fail to find evidence of increased audit fees in response to expanded auditor's reports in the U.K.

accounts may also reflect auditors' expectation of increased PCAOB inspection risk related to CAM accounts (Bhaskar 2020). Such increased auditor attention could result in higher audit quality and/or motivate management to improve the quality of the underlying financial reporting disclosures (PCAOB 2017). Second, the PCAOB suggests that management may improve the quality of their disclosures because they know that auditors and investors are likely to scrutinize the accounts and disclosures identified as CAMs. Lastly, the PCAOB highlights that CAMs could result in increased audit committee focus and engagement related to CAM accounts and disclosures (PCAOB 2017).

Prior research suggests that an indirect benefit to investors is possible. For example, using an analytical model, Chen, Jiang, and Zhang (2019) show that additional audit quality disclosures can motivate auditors to increase audit effort in order to avoid liability in the event of audit failure. Reid et al. (2019) find that expanded audit reports in the U.K. are associated with improvement in financial reporting quality as measured by discretionary accruals, a company's propensity to meet or beat consensus analysts' forecasts, and increases in the earnings response coefficient. Fuller, Joe, and Luippold (2019) document that managers react to auditor CAM disclosures by increasing their own disclosures. Finally, Santos et al. (2020) find that Brazilian CAMs are associated with improved financial reporting quality and less earnings management.

Despite these findings, other studies are either (1) unable to document a relation between expanded audit reports and improved financial reporting quality or reduced earnings management, or (2) only able to document a relationship under certain conditions. For example, Gutierrez et al. (2018), Bédard et al. (2019), Liao et al. (2019), and Burke et al. (2020) were unable to document that expanded audit reports improved audit and/or financial reporting quality as measured by discretionary accruals. Klueber et al. (2018) found that managers were less likely

to engage in earnings management *only* when KAM disclosures in international audit reports are highly precise.

The findings from the studies to date are likely mixed given they are limited in their ability to directly infer the association between expanded audit report risk disclosures and changes in reporting. For example, the Chen et al. (2019) findings relate to variation in auditor disclosures rather than disclosures tied to a company's underlying financial reporting matters. In addition, Reid et al. (2019) examine post-period effects without being able to tie their results directly to specific accounts or transactions underlying the CAM. Similarly, several other studies (e.g., Gutierrez et al. 2018; Lennox et al. 2019) only examine whether the count of auditor risk disclosures impacts financial reporting quality. By focusing on one particular account and the specific related auditor disclosures, we are able to more directly test the financial reporting outcomes associated with expanded audit reports. In addition, to our knowledge, our study is the first archival study to examine the association between *U.S.*-expanded audit reports and earnings management.

Critical Audit Matters and Tax Accounting

We contribute to the literature by examining the effect of the disclosure of one specific category of CAMs on the financial reporting of the accounts that relate to that CAM. In particular, we examine whether the disclosure of a tax-related CAM in a U.S. audit report influences the use of tax expense to manage earnings. We focus on tax-related CAMs and tax-related earning management because (1) tax-related CAMs are relatively common in U.S. audit reporting (i.e., fifth most frequently disclosed CAM), (2) tax-related CAMs can be directly linked to footnote disclosures in which manipulation can be identified, and (3) tax reporting is economically meaningful.

Taxes represent one of a company's largest cash outflows and one of the largest expenses on the income statement (Armstrong, Blouin, and Larcker 2012). Given different rules and principles that govern GAAP and tax reporting, Graham et al. (2012) argue that accounting for income taxes is one of the more complex areas of financial reporting. Prior literature also documents that taxes account for a significant portion of restatements (Plumlee and Yohn 2010; Seetharaman, Sun, and Wang 2011), and are a common account that generates PCAOB scrutiny (Acito, Hogan, and Mergenthaler 2018; Drake et al. 2016). Furthermore, while evidence suggests that audit offices need to employ a specialized team of auditors to respond to the unique challenges and risks associated with auditing income taxes (Goldman, Harris, and Omer 2019), other evidence suggests management, and to a lesser degree auditors, affect variation in tax reserves (Koester, Stomberg, Williams, and Xia 2019), thus offering us a unique setting in which to consider CAM reporting effects. Additionally, the nature of tax reporting provides details not available for many other accounts, enabling us to evaluate the effect of CAM reporting in more detail. By focusing on tax-related CAMs disclosures and the reporting of the underlying and associated tax accounts, we are able to more clearly identify the consequences of the CAM reporting standard.

Research documents that companies use tax accounts as an earnings management tool. One stream of literature examines the use of specific tax accounts to meet earnings benchmarks (e.g., Frank and Rego 2006; Cazier et al. 2015; Gupta et al. 2016; Krull 2004), while another stream of literature focuses on the use of third- to fourth-quarter ETR changes to meet earnings benchmarks. Dhaliwal et al. (2004) document that companies use fourth-quarter effective tax rate (ETR) adjustments to meet analysts' forecasts. They argue that, "the combination of judgment in estimating reserves and complex tax rules makes it difficult for financial statement users to

evaluate managers' discretionary accruals for tax expense" (435). The information asymmetry between managers and investors, as well as the quarterly reporting of ETRs, allows management to use ETRs to meet earnings targets. The complexities of tax reporting, of compensation incentives related to meeting earnings benchmarks, and the opportunity for management manipulation make fourth-quarter earnings management via the tax expense a fruitful setting to evaluate the effect of tax CAMs on tax accounts. The use of tax expense as an earnings management tool has been examined in the auditor setting in prior literature. For example, tax expense earnings management is greater in the presence of ineffective internal controls over the tax function (Gleason, Pincus, and Rego 2017), when the auditor provides tax services (Cook, Huston, and Omer 2008), when the auditor is considered an industry expert (Christensen, Olson, and Omer 2015) and when managerial incentives are stronger (Beardsley, Kara, and Weaver 2019). We expect that tax-related CAMs increase management focus and auditor scrutiny, and therefore, result in less tax-related earnings management. Thus, we state our hypothesis as follows:

> **Hypothesis:** Companies with audit reports that disclose tax-related CAMs engage in less tax-expense earnings management in the year of the CAM disclosure compared to the year prior to the CAM disclosure.

III. RESEARCH DESIGN

Sample and Descriptive Statistics

We present our sample selection in Table 1. We begin by identifying all CAMs disclosed in audit reports for the first fiscal year of the PCAOB's expanded audit reporting requirement (i.e., fiscal years ending on or after June 30, 2019).[6] We end our CAM collection on March 19,

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[6] We require a company's auditor to report at least one CAM because the PCAOB expects that all audit reports will report at least one CAM (AS 3101). In our additional analysis, we consider whether this design choice affects our inferences and find that our inferences do not change.

2020 as most COVID-19 pandemic "stay-at-home" orders were effective nationwide by the end of March 2020. Given that most audit reports signed after March 31, 2020 likely represent audits with a non-trivial amount of remote work in a very uncertain operating environment, we did not want our conclusions to be affected by a non-representative event. For each company with a CAM in 2019, we collect data on the prior year (i.e., 2018) to create a two-year sample for each company. We follow the sample cuts in Dhaliwal et al. (2004). We remove observations from the financial and utility industries (SIC 4900–4932 and 6000–6999) and observations missing adequate data for our analysis.[7] Our final sample includes 378 companies with CAMs in 2019 with 57 of these companies with tax-related CAMs.

INSERT TABLE 1

We group the CAMs into 17 categories following the taxonomy in Appendix B. Table 2 presents the CAM categories for all CAMs reported as of March 19, 2020 along with the CAM categories for our final sample, split into two groups—those with and without tax-related CAMs. Tax-related CAMs are the 5th most frequent CAM in our data, and thus make up a meaningful portion of the total CAMs reported.

INSERT TABLE 2

Figure 1 presents the CAM categories for our tax earnings management sample. In our sample, the most common CAM categories are intangible assets, revenue, mergers and acquisitions, property, and taxes. The distribution of CAM categories for our tax earnings management sample is similar to the distribution of CAM categories for the broader set of companies for which we have 2019 CAM data reported in Table 2.

INSERT FIGURE 1

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[7] In additional analysis, we expand the number of years of data in the pre-CAM period and find that our inferences do not change.

In Figure 2, we present the CAM categories for our tax-related CAM sample. We include this to illustrate that, while our interest is in companies with a tax-related CAM, 58 percent of the tax CAMs are accompanied by other CAMs. However, the additional CAMs are not clustered in any one particular category, and the most common categories (i.e., intangibles, revenue, mergers and acquisitions, etc.) are similar to the broader sample.

INSERT FIGURE 2

Figure 3 presents the number of CAMs reported per company in 2019 for our broad sample of CAM companies, along with the tax and non-tax CAM company subsamples. In our sample, the majority of companies (i.e., 60.58 percent) have only one CAM in 2019; however, 31.75 percent have two CAMs, 5.82 percent have three CAMs, 1.32 percent have four CAMs, and 0.53 percent have six CAMs. We segregate companies into those with and without tax CAMs and note that 49.12 percent of tax-CAM companies have only one CAM in 2019, whereas 50.88 percent of tax-CAM companies have multiple CAMs.

Earnings management using tax accounts

To test our hypothesis that tax-related CAMs are associated with a decline in the use of ETRs to meet analysts' forecasts, we first present an univariate analysis examining whether, following disclosure of a tax-related CAM, companies less likely to use tax expense to successfully meet analysts' earnings forecasts. Following Gupta et al. (2016) we create a variable *TaxEM* set equal to one when *PremanagedEPS* < *AftertaxEPS$_{forecast}$*, but *AftertaxEPS$_{actual}$* ≥ *Aftertax EPS$_{forecast}$*.[8] If the disclosure of tax-related CAMs constrains companies' use of tax

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[8] Gupta et al. (2016) define *PremanagedEPS = PretaxEPS$_{Actual}$* (1-*ETR$_{forecast}$*), where *ETR$_{forecast}$* is obtained from I/B/E/S by dividing the median *AftertaxEPS$_{forecast}$* less median *PretaxEPS$_{forecast}$* by the median *PretaxEPS$_{forecast}$* This is slightly different than the amounts calculated below following Dhaliwal et al. (2004).

expense to meet analysts' forecasts, we expect a smaller percentage of companies receiving Tax

CAMs will meet analysts' earnings forecasts with tax expense.

Next, we follow Dhaliwal et al. (2004), who find that companies reduce their ETRs from

the third to the fourth quarter to increase reported income and meet analysts' forecasts. In

particular, we apply their multivariate model to examine whether the disclosure of tax-related

CAMs affects companies use of tax accounts to manage earnings. We construct the following

ordinary least squares linear regression model:

$$ETR4\_ETR3 = \alpha_0 + \varphi_1*Miss + \varphi_2*Miss\_Amount + \varphi_3*TaxCamCo + \varphi_4*Post$$

$$+ \varphi_5*Post*Miss\_Amount + \varphi_6Post*TaxCamCo + \varphi_7*TaxCamCo*Miss\_Amount$$

$$+ \varphi_8Post*TaxCamCo*Miss\_Amount + \varphi_9*Induced\_Chg\_ETR + \varphi_{10}*Tax\_Owed$$

$$+ \varphi_{11}*EtrQ3 + \varphi_{12}*NumCams + \varepsilon. \tag{1}$$

Where *ETR4_ETR3* is the change in annual ETR from the third to fourth quarter, *Miss* is

an indicator set equal to one if the I/B/E/S consensus forecast estimate less earnings absent tax

expense management is greater than zero, and 0 otherwise. *Miss_Amount* is the I/B/E/S

consensus forecast estimate less earnings absent tax expense management, *Induced_Chg_ETR* is

the tax effect of unexpected pre-tax earnings, *Tax_Owed* is the extent of overpayment or

underpayment of estimated taxes based on taxes owed, and *EtrQ3* is the reported third-quarter

ETR.[9] Our variable of interest is *TaxCamCo,* an indicator set equal to 1 for companies with a

tax-related CAM in 2019, and 0 otherwise. All variables follow Dhaliwal et al. (2004) and are

fully defined in Appendix B.[10] Consistent with the findings in Dhaliwal et al. (2004), we expect a

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[9] Dhaliwal et al. (2004) interact *Miss_Amount* with *Miss* to test for an asymmetric response between companies that exceed and miss their earnings forecasts. We omit this interaction to avoid a four-way interaction in our analysis.
[10] Dhaliwal et al. (2004) eliminate observations that are not within 5 cents per share of the analysts' consensus forecast. However, this significantly restricts our sample size; thus, we use a 10-cent range to ensure adequate sample size. While this may bias against us finding evidence of earnings management, other studies have similarly altered the Dhaliwal et al. (2004) screens (e.g., Beardsley, Robinson, and Wong 2019; Duxbury 2016).

negative coefficient on *Miss_Amount*, indicating that companies manage reported tax expense downward to meet earnings targets. The indicator *Post* is set equal to one for fiscal year 2019 and thus captures the year in which CAM disclosures were first required for large-accelerated filers. The interaction between *Post* and *Miss_Amount* captures the change in the use of tax expense management to meet targets from the pre- to post-period. The triple interaction of *TaxCamCo* and *Post* and *Miss_Amount* captures the differential use of fourth-quarter ETR adjustments as an earnings management tool from the pre- to the post-period for tax CAM companies relative to non-tax CAM companies. If the disclosure of tax-related CAMs affects companies' use of fourth-quarter tax expense as an earnings management tool to meet analysts' forecasts, we expect a positive coefficient on *Post*TaxCamCo*Miss_Amount*, consistent with less earnings management via tax accounts after disclosure of tax-related CAMs.

One critical assumption in our analysis is that companies and their auditors are aware of the forthcoming disclosure of a tax-related CAM in the audit report at the time the company adjusts its fourth-quarter ETRs. Because the PCAOB requires the auditors' CAM disclosures to arise from matters communicated to the audit committee (PCAOB 2017), company management is likely to be informed in advance of anticipated CAM disclosures. Before required CAM disclosures, auditors were required to discuss the matters that could result in CAM disclosures with companies' audit committees (PCAOB 2012). Thus, to the extent companies and auditors were aware that taxes were a CAM area in the periods preceding a CAM disclosure, if we observe a change in the use of tax accounts for earnings management, we attribute it to the public *disclosure* of the CAM. That is, because auditors and management were aware of the complexities of tax accounts in the pre-CAM period, the only change resulting from the CAM disclosure is that external parties are now made privy to the information.

IV. PRIMARY ANALYSIS

Descriptive Statistics

In Table 3, similar to Gupta et al. (2016), we examine the likelihood of companies to miss analysts' earnings forecasts with pre-managed earnings, but meet analysts' earnings forecasts with after-tax earnings. We compare companies with and without tax-related CAMs for both the pre- and post-CAM periods. We conduct this analysis for three different samples. In Table 3 Panel A, we include a broad sample of companies with four years before the CAM requirement and one year following the CAM requirement included. In Table 3 Panel B, we include the same companies but only include one year prior to and subsequent the CAM reporting change. Finally, in Table 3 Panel C, we include the earnings management sample we use in our last chance earnings management test that follows. Overall we find a significant decrease in the propensity to use tax expense to meet analysts' earnings forecasts among companies with one or more tax-related CAMs, but do not find evidence of a similar decrease for companies without a tax-related CAM. While the results are on a univariate basis only, this test is restrictive in that it requires companies to meet a benchmark that would have been missed absent changes in tax expense. We next move to the last chance earnings management analysis, which applies a less restrictive assumption about managing earnings via tax expense.

INSERT TABLE 3

Next, in Table 4, we report descriptive statistics of the variables used in Equation (1) for our full sample (Panel A) and the sample partitioned by $TaxCamCo = 1$ versus $= 0$ (Panel B). Among the full sample of companies, the change in ETRs from third to fourth quarter is negative, suggesting a decline in reported ETRs. However, in Panel B we find that this change in ETRs is concentrated among our tax-CAM company years. In untabulated univariate analysis,

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we compare mean *ETR4_ETR3* in the pre- and post-CAM periods. We find that while companies without a tax-related CAM do not exhibit a significant difference, companies with tax-related CAMs exhibit a significant decline (p < 0.10). Additionally, among all company-years we note a propensity to miss analyst forecasts absent any tax earnings management (mean *Miss* = 0.4735). Finally, we highlight that our sample period captures tax years after the Tax Cuts and Jobs Act, which reduced the statutory corporate tax rate from a progressive 35 percent to a flat 21 percent.

<div align="center">INSERT TABLE 4</div>

Hypothesis Testing

Table 5 presents the results of our main analyses. In Column (1), we present the results of Equation (1) on the sample of both tax-CAM companies and non-tax-CAM companies. We note two specific results of interest. First, the coefficient on the interaction of *TaxCamCo* and *Miss_Amount* is negative and significant (coeff. = -0.203, t-stat -3.80), suggesting that before the disclosure of the tax-related CAM, tax CAM companies appear to use fourth-quarter ETRs as an earnings management tool. The coefficient of interest, *TaxCamCo*Miss_Amount*Post* is positive and significant (coeff. = 0.271, t-stat 3.23), suggesting that after the disclosure of tax-related CAMs, these tax CAM companies appear to have reduced the use of ETRs as a fourth-quarter earnings management tool to meet analyst earnings forecasts.

In Columns (2) and (3), we modify Equation (1) and test the *TaxCamCo* = 1 subsample separately from the *TaxCamCo* = 0 subsample. The results in Column (2) similarly indicate that after the disclosure of tax-related CAMs, tax CAM companies reduce their use of fourth-quarter ETRs to meet analyst earnings forecasts. By contrast, the sample of non-tax related CAM companies does not appear to use fourth-quarter ETRs as an earning management tool in the pre-CAM disclosure period. However, the negative coefficient on *Post*Miss_Amount* suggests that

these companies use fourth-quarter ETRs as an earnings management tool in the CAM period. In Column (2), an F-test of whether the sum of the coefficient on *Miss_Amount* and *Miss_Amount*Post* is significantly different than zero is insignificant, suggesting that companies with tax-related CAMs no longer engage in earnings management via tax expense in the post-CAM period (F-stat = 0.19, p = 0.66). Comparing Columns (2) and (3), we note a difference in the coefficient on *Induced_Chg_ETR*, which captures the tax effect of fourth-quarter unexpected earnings. While in Table 2, both the samples have similar *Induced_Chg_ETR*, and in the main regression in Column (1), the coefficient is positive, as predicted in Dhaliwal et al. (2004), we note that the coefficient is negative in the tax-related CAM sample.[11]

INSERT TABLE 5

V. ADDITIONAL ANALYSES

In addition to using fourth-quarter ETRs to manage earnings, evidence suggests other tax accounts are subject to managerial discretion. FIN No. 48 (codified in ASC 740), *Accounting for Uncertainty in Income Taxes* (FIN 48) requires companies to estimate, record, and disclose a contingent liability for unrecognized tax benefits when management determines that the likelihood of sustaining a tax position upon audit falls below the more-likely-than-not threshold. De Simone et al. (2014) document considerable variation in reporting for the same underlying transactions under FIN 48, suggesting that complex transactions and managerial discretion lead to divergent reporting, even within the same audit office. Cazier et al. (2015) suggest that, given

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[11] In untabulated univariate analysis, we note a statistically significant decline in the value of *Induced_Chg_ETR* between the pre- and post-CAM periods, but no statistically different change among the *TaxCamCo* = 1 sample. Thus, we conclude our results of a change in reporting behavior among companies with tax-related CAMs does not relate to variation in *Induced_Chg_ETR*.

the large number of transactions and the complexity and uncertainty associated with tax

positions, managers may use discretion in establishing tax reserves.[12]

We next consider whether the disclosure of a tax-related CAM alters company reporting

of UTBs. Specifically, we follow the reasoning in Drake et al. (2016), who demonstrate that

PCAOB scrutiny over audits of tax accounts results in changes to UTB balances, concentrated in

revisions to the estimate related to prior-period tax positions. As Drake et al. (2016) argue, the

change in the reserve for prior-period positions is a particularly fruitful account to examine the

effect of scrutiny as the tax position has already been taken; thus, revisions to the reserve for

prior-period positions reflect a change in management's estimate and/or increases in the reserve

as a result of increased auditor scrutiny. Thus, we expect that disclosure of tax-related CAMs

will be reflected in changes to the UTB balance. Additionally, if we note systematic increases in

the UTB related to prior-period tax positions, we interpret that as evidence of revisions to the

reserve resulting from the CAM disclosure. Alternatively, we may not observe any changes to

financial reporting when companies' audit reports include tax-related CAMs. If management's

accounting and estimates are adequate and CAMs capture disclosure only, we may not observe

differences in the tax-related accounts for tax-related CAMs, either because the changes are not

substantial, or disclosing a CAM does not result in increased manager or auditor scrutiny.

To examine the association between the disclosure of tax-related CAMs and UTBs, we

use two distinct tests. First, we consider the change in the UTB balance associated with the tax-

related CAM disclosure. Second, we consider the components of the annual UTB rollforward

disclosure. FIN 48 requires an annual reconciliation between the beginning of the year UTB

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[12] Cazier et al. (2015) fail to find evidence that the disclosure of tax reserve information required under FIN 48 reduces companies' use of tax reserves to meet annual analysts' forecasts. By contrast, Gupta et al. (2016) find decrease in companies' use of tax reserves to meet quarterly benchmarks in the post-FIN 48 period.

balance and the ending, which includes increases to the UTB reserve from current-year tax

positions, increases and decreases in the reserve related to prior-year tax positions, decreases in

the reserve for settlements with tax authorities, and decreases in the reserve for the expirations of

statutes of limitations. Similar to Drake et al. (2016), we are particularly interested in changes to

the reserve related to prior-year positions. In all regressions, we include an indicator, *TaxCamCo*

set equal to 1 for companies with a tax-related CAM, and 0 otherwise. We also include an

indicator (*Post*) set equal to 1 for fiscal year 2019 to capture the year that CAM disclosures were

first required for large-accelerated filers, and 0 for the pre-CAM disclosure period. We measure

our dependent variable, ΔUTB, as the change in the UTB reserve scaled by total assets, following

prior literature (Hutchens and Rego 2015). We control for known determinants of UTBs (Drake

et al. 2016). We also consider the components of the annual UTB rollforward as these provide

additional insight into the changes resulting from the disclosure of a tax-related CAM.

We estimate the following ordinary least squares linear regression model:

ΔUTB or *UTBComponents* = α_0 + β_1*TaxCamCo* + β_2*Post*

+ β_3*TaxCamCo*Post* + $\sum \beta_{4\text{-}k}$*ΔControls* + ε. (2)

For Equation 2, we include controls (fully defined in Appendix B) for the determinants of

UTB and other income tax accounts from prior literature, including size, profitability, foreign

income, leverage, research and development expense, book-to-market ratio, sales, SG&A

expenses, property plant and equipment, equity income, net operating losses, and cash holdings

(e.g., Cazier, Rego, Tian, and Wilson 2009; McGuire, Omer, and Wang 2012; Hanlon, Maydew,

and Saavedra 2017; Christensen et al. 2015). We also include a control for the companies'

annual cash effective tax rate (*ETR*) to control for the relation between the UTB liability and the

level of tax avoidance. We construct change measures of all determinants as the change from

year t-1 to t scaled by total assets in year t-1. We include industry fixed effects using the Fama-French 17 industry classification, and use heteroskedastic corrected standard errors clustered at the company-level. Finally, we include a control for the total number of CAMs received by the company to control for the overall complexity of the audit.

In Table 6, we present descriptive statistics for the UTB sample. As above, we require one year before the CAM disclosures and one year of CAM disclosures. Again, all companies in our sample have at least one CAM disclosed by its auditor, and our interest is in differences between companies with tax-related CAMs and those without. Note that the data requirements for the UTB tests result in a larger sample than the earnings management tests because the earnings management tests require analyst forecasts. In Panel A, we present the descriptive statistics for the sample, and in Panel B, we partition the sample into *TaxCamCo* = 1 and *TaxCamCo* = 0 subsamples. In our UTB sample, 19.45 percent of companies have a tax-related CAM, which equates to 219 companies. The mean level of UTB as a percent of assets in the sample is 1.13, with a mean of 1.73 for tax CAM companies and a mean of 0.98 for non-tax CAM companies. Consistent with the level of UTBs being higher, on average, for tax-CAM companies, all six UTB reconciliation components are also higher, on average, for tax-CAM companies. In terms of control variables in the change in UTB regression, tax CAM companies have a lower average change in size, a larger reduction in cash, are more likely to have an NOL balance, and have more CAMs on average than non-tax CAM companies.

Table 6 Panel C presents the results of Equation (2). The positive coefficient on *TaxCamCo*Post* in Column (1) indicates that companies with tax-related CAMs increased UTBs in the year the tax-related CAM was disclosed more so than in the year prior to disclosure. Additionally, when we break the change in UTB into its components (Columns (2)–(6)), we

note, in Column (3), that the change in UTB is driven by increases to the reserve for tax positions taken in prior periods. As Drake et al. (2016) note, changes in the reserve related to prior-year tax positions are informative about intentional revisions to the reserve because the tax positions themselves cannot be changed, but increases in the reserve reflect revisions to expectations about the likelihood of sustaining the reserve upon review by tax authorities. The significant coefficient on *PY_Inc* and the insignificant coefficient on *PY_Dec* suggest that in the year of the tax-related CAM disclosure, Tax CAM companies systematically revise the estimates upward, consistent with management and auditor focus on the UTB.[13]

INSERT TABLE 6

Table 7 repeats our earnings management and UTB analysis using a five-year sample that includes four years in the pre-CAM period. Panel A presents the earnings management analysis. We find a negative and significant coefficient on *TaxCamCo*Miss_Amount*, capturing the use of fourth-quarter ETRs to manage earnings to meet analyst forecasts in the pre-CAM period. Similar to our main results in Table 5, we find a positive and significant coefficient on the interaction of *TaxCamCo*Miss_Amount*Post*, suggesting that the disclosure of tax-related CAMs reduces the use of fourth-quarter ETRs as an earnings management tool. In Panel B, we find similar, but slightly weaker results for the UTB regressions; that is, tax CAM companies increase the reserve for prior-year positions after the identification of a tax-related CAM.

INSERT TABLE 7

To further ensure our results are not driven by sample restrictions, we re-estimate our earnings management tests and UTBs tests on the two-year sample, including large-accelerated filers without CAMs as well as smaller filers (Table 8). Our primary sample excludes large-

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[13] In untabulated analysis, we exclude years with negative pre-tax income and continue to find similar results.

accelerated filers that do not report CAMs as the PCAOB's assurance standard regarding CAMs anticipates that all companies should have at least one CAM (AS 3101). Thus, large-accelerated filers without a CAM may have unique company and/or audit characteristics. By excluding them from our primary sample, we maintain a cleaner control sample of companies with non-tax CAMs versus a control sample that includes both companies with non-tax CAMs and companies without CAMs. Accelerated and non-accelerated filers were excluded from the control group in our primary sample because they were not yet subject to the CAM guidelines. Nonetheless, when we include large-accelerated filers without CAMs and smaller filers in our control sample, the inference from our earnings management and UTB tests are unchanged.

<center>INSERT TABLE 8</center>

VI. CONCLUSION

We investigate one potential benefit of expanded audit reporting in the U.S. by examining how disclosure of a tax-related CAM by the auditor affects the reporting of income tax accounts. Prior literature documents that companies use fourth-quarter ETRs to meet analyst forecasts. We contribute to this literature by documenting that the disclosure of a tax-related CAM appears to eliminate the use of tax expense as an earnings management tool. Additionally, we observe that companies with tax-related CAMs alter their reporting of UTBs via positive adjustments related to prior-period tax positions. Taken together, these results support the PCAOB's expectation that expanded audit reporting could indirectly benefit investors by increasing management and auditor scrutiny of the matters underlying CAMs. This finding is important as prior research on expanded audit reporting outside of the U.S. largely finds that expanded audit reports have fallen short on their ability to inform investors (e.g., Gutierrez et al. 2018; Bédard et al. 2019; Liao et al. 2019). While some studies show that expanded audit reports

<center>23</center>

in the U.K. or Brazil have improved financial reporting quality and reduced earnings management (Reid et al. 2019; Santos et al. 2020), other studies are unable to document an effect (e.g., Gutierrez et al. 2018; Bédard et al. 2019; Liao et al. 2019). In the U.S. setting, Burke et al. (2020) examine the determinants of CAMs and document increased disclosures, but fail to identify evidence of a change in earnings management from CAM disclosures. We contribute to the audit literature by (1) examining a setting that enables better mapping of CAMs to related CAM-account reporting, which thus enables us to document an effect if one exists, and (2) examining whether such reporting benefit arises in the U.S. (non-international) expanded audit report setting.

Our results are subject to several caveats. First, because CAM reporting was effective for large-accelerated filers with fiscal years ending on or after June 30, 2019, we have a limited sample in which to fully examine the long-range outcomes of CAM disclosures. Additionally, while we argue that focusing on tax-related CAMs and tax outcomes allows us to more clearly identify an association between the CAM disclosure and the outcome of interest, it is possible that the tax-related CAM disclosures are unique and not representative of other CAMs. Finally, because of data limitations, we have a small sample of large-accelerated filer companies. To the extent the results we document do not generalize to all companies, the disclosure effect we document may be concentrated among these large companies. However, the effect we document is consistent with the expectations of the PCAOB that CAMs increased management and auditor scrutiny of the matters underlying CAMs.

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Appendix A – Example Audit Report

Apple, Inc. September 28, 2019 Form 10-K

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Apple Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Apple Inc. as of September 28, 2019 and September 29, 2018, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 28, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of Apple Inc. at September 28, 2019 and September 29, 2018, and the results of its operations and its cash flows for each of the three years in the period ended September 28, 2019, in conformity with U.S. generally accepted accounting principles. We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), Apple Inc.'s internal control over financial reporting as of September 28, 2019, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated October 30, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of Apple Inc.'s management. Our responsibility is to express an opinion on Apple Inc.'s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

European Commission State Aid Matter Uncertain Tax Position

Description of the Matter | As discussed in Note 5 of the financial statements, the European Commission ("EC") has announced its decision that Ireland granted state aid to Apple Inc. by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of Apple Inc. The decision ordered Ireland to calculate and recover additional taxes from Apple Inc. for the period from June 2003 through December 2014. The adjusted amount indicated by the EC to be recovered is up to €12.9 billion, plus interest.

Auditing management's evaluation of the uncertain tax position stemming from the effects of the EC decision is complex and highly judgmental due to the inherent uncertainty in predicting the ultimate resolution of the matter.

How We Addressed the Matter in Our Audit | We tested controls over the risk of material misstatement relating to the evaluation of the EC state aid matter, including management's evaluation of the advice of legal counsel, the assessment as to whether Apple Inc.'s position is more likely than not to be sustained and the development of the related disclosure.

To evaluate Apple Inc.'s assessment of whether sustainment of its position is a more likely than not outcome, including underlying assumptions, our audit procedures included, among others, reading the EC August 2016 ruling and available correspondence between Apple Inc. and the EC, and the EC and Ireland. We also requested and received internal and external legal counsel confirmation letters, discussed the allegations with internal and external legal counsel and Apple Inc. tax personnel and obtained a representation letter from Apple Inc. We involved our EC and tax subject matter resources in considering the applicable tax laws, the pending appeal, the current status of legal precedent relevant to that appeal and the proceedings at the court hearing in September 2019. In addition, we evaluated Apple Inc.'s disclosure included in Note 5 in relation to this matter.

/s/ Ernst & Young LLP
We have served as Apple Inc.'s auditor since 2009.

San Jose, California
October 30, 2019

Appendix B: CAM taxonomy and variable descriptions

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.
Property	CAMs identified by Audit Analytics as relating to PPE, capitalization, long-lived assets, reserves, or depreciation.
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.
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, 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, among others.

Variable descriptions

Variable	Description
TaxCamCo	A dichotomous variable that equals one if a tax-related issue was identified as a critical audit matter during the year, and equals zero otherwise.
NonTaxCamCo	A dichotomous variable that equals one if *TaxCamCo* = 0, and equals zero otherwise.
TaxEM	Following Gupta et al. (2016) dichotomous variable that equals one if *PremanagedEPS actual* < *AftertaxEPS forecast* and *AftertaxEPS actual* > *AftertaxEPS forecast*, zero otherwise. *PremanagedEPS* is measured as $PretaxEPS_{Actual}$ (1-$ETR_{forecast}$), where $ETR_{forecast}$ is obtained from I/B/E/S by dividing the median $AftertaxEPS_{forecast}$ less median $PretaxEPS_{forecast}$ by the median $PretaxEPS_{forecast}$
ETR4_ETR3	Fourth-quarter ETR minus third-quarter ETR. We calculate the ETR as the tax expense (TXT) scaled by pre-tax income (PI) for each quarter.
Miss	A dichotomous variable that equals one if *Miss_Amount* > 0, and equals zero otherwise.
Miss_Amount	The last IBES consensus EPS forecast minus EPS calculated using third-quarter ETR, which is pre-tax income multiplied by one minus third-quarter ETR multiplied by the IBES split factor all divided by common shares outstanding.
Induced_Chg_ETR	Induced tax change divided by pre-tax income (PI), where induced tax change is calculated as the statutory corporate income tax rate (21% in 2018 and 2019) minus third-quarter ETR (TXT/PI) multiplied by unexpected pre-tax income. Unexpected pre-tax income is calculated as IBES actual earnings per share minus IBES consensus earnings per share, this difference is then multiplied the IBES split factor common shares outstanding. This product is then divided by one minus the statutory corporate income tax rate (21% in 2018 and 2019).
Tax_Owed	Income taxes payable (TXP) less income tax refund (TXR) all scaled by pre-tax income.
ETRQ3	Tax expenses (TXT) reported on the third-quarter 10-Q divided by pre-tax income (PI) reported on the third-quarter 10-Q.
NumCams	A count of the total number of CAMs issued to the company in a given year as downloaded from Audit Analytics.
UTB	Total uncertain tax benefits (TXTUBEND) in t scaled by prior-year total assets (AT).
ΔUTB	Total uncertain tax benefits (TXTUBEND) in t minus total uncertain tax benefits in t-1, this difference is scaled by prior-year total assets (AT).
CY_Inc	Increases in the reserve for uncertain tax benefits for positions taken during the current period (TXTUBPOSINC) divided by prior-year total assets (AT).
PY_Inc	Increases in the reserve for uncertain tax benefits for prior-period positions (TXTUBPOSPINC) divided by prior-year total assets (AT).
PY_Dec	Decreases in the reserve for uncertain tax benefits for prior-period positions (TXTUBPOSPDEC) divided by prior-year total assets (AT).
Settle	Decreases in the reserve for uncertain tax benefits resulting from settlements with tax authorities (TXTUBSETTLE) divided by prior-year total assets (AT).
SOL	Decreases in the reserve for uncertain tax benefits resulting from the lapse of the applicable statute of limitations (TXTUBSOFLIMIT) divided by prior-year total assets (AT).
FI	Pre-tax foreign income (PIFO) divided by prior-year total assets (AT).
R&D	Research and development expense (XRD) divided by prior-year total assets (AT).

Size	Natural log of total assets (AT).
PPE	Net property, plant, and equipment (PPENT) divided by prior-year total assets (AT).
Cash	Cash holdings (CHE) divided by prior-year total assets (AT).
EquityInc	Equity income in subsidiaries (EQINC) divided by prior-year total assets (AT).
BTM	Book value of equity (CEQ) divided by market value of equity (PRCC_F*CSHO).
Depr	Depreciation and amortization expense (DP) divided by prior-year total assets (AT).
SGA	Selling, general, and administrative expenses (XSGA) divided by prior-year total assets (AT).
ROA	Income before extraordinary items (IB) divided by average total assets from t-1 to t (AT).
CapEx	Capital expenditures (CAPX) divided by prior-year total assets (AT).
CETR	Cash taxes paid (TXPD) divided by pre-tax income (PI) net of special items (SPI).
Leverage	Long-term debt (DLTT) divided by prior-year total assets (AT).

For variables identified as a change, the change is measured from year t-1 to t and scaled by prior-year assets (t-1)

Figure 1   **CAM Categories for Full Sample**
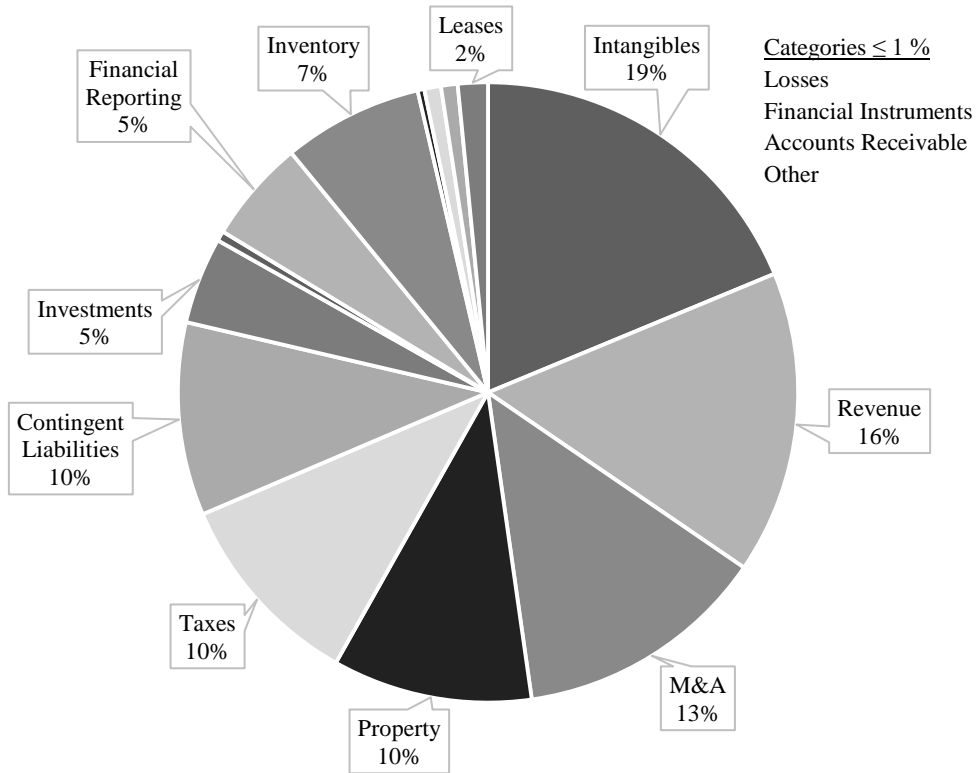
Notes: This figure summarizes the categories of CAM disclosures for all companies in our tax earnings management sample (n = 378 companies). We summarize the categories in Appendix B.

Figure 2 **Additional CAMs for Tax CAM Companies**
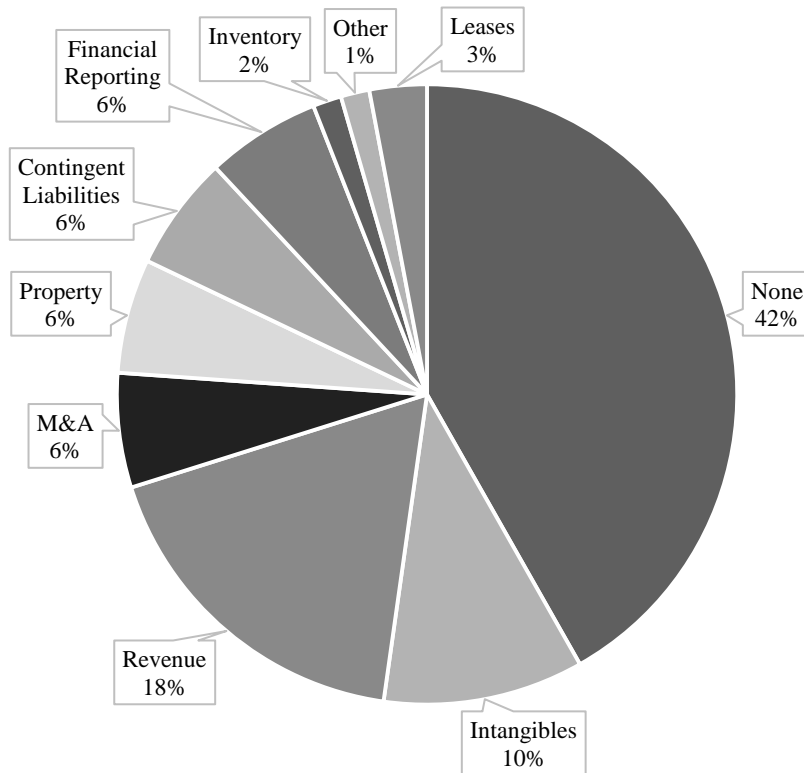
Notes: This figure summarizes the categories of CAM disclosures for all companies in our sample with tax-related CAMs (n = 57). We summarize the categories in Appendix B.

Figure 3   **Number of CAMs per Company**
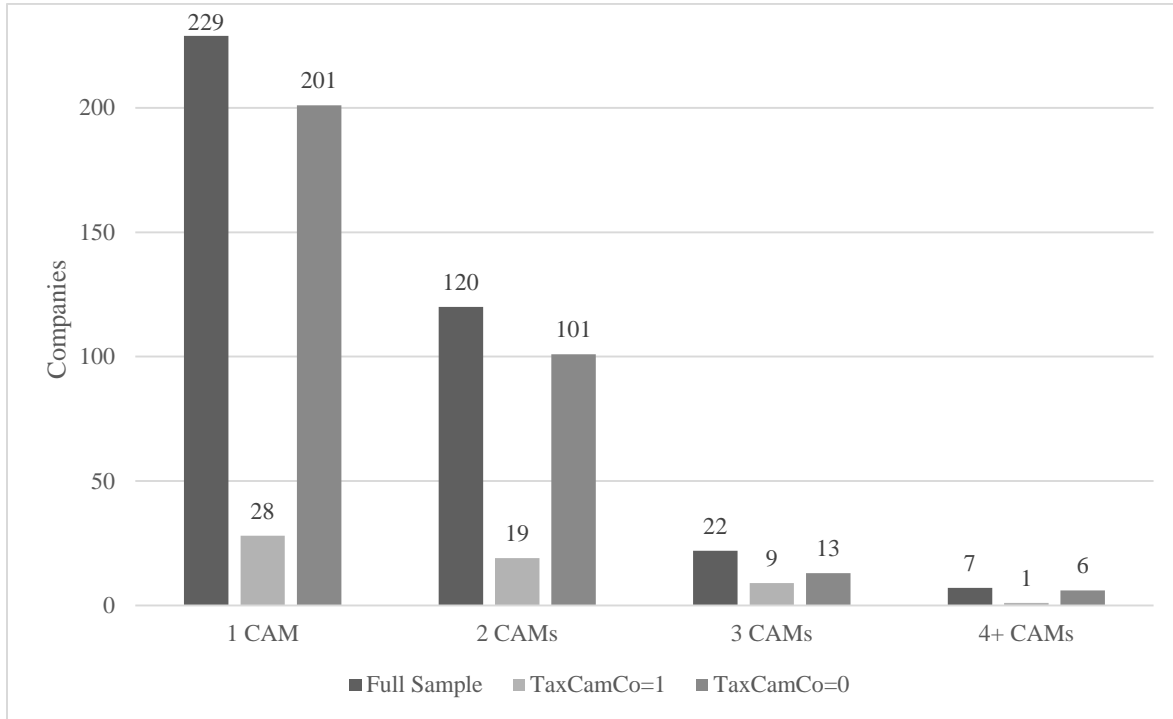
Notes: This figure summarizes the number of CAMs per company for all companies in our sample (n = 378), which includes 57 companies with a tax CAM and 321 companies with non-tax CAMs. We summarize the categories in Appendix B.

Table 1   Sample Selection

Restriction	Observations
Earnings management via tax account analysis	
Companies with 2019 CAM data available in Audit Analytics	2,027
Add 2018 data for these same companies	2,027
Less observations without a Compustat match	(112)
Less observations that are not large-accelerated filers	(119)
Less observations without an IBES match	(1,749)
Less observation without positive pre-tax income and tax expense	(502)
Less observations whose difference between the IBES consensus forecast and the actual earnings per shares is not within ten cents per share	(468)
Less observations with actual earnings that are not within ten cents per share of the consensus forecast	(146)
Less observations in a regulated (financial or utility) industry	(89)
Less observations without data necessary to calculate necessary control variables	(73)
Less observations without two consecutive years of complete data	(40)
Full Sample	756
UTB Analysis	
Companies with 2019 CAM data available in Audit Analytics	2,027
Add 2018 data for these same companies	2,027
Less observations without a Compustat match	(112)
Less observations that are not large-accelerated filers	(119)
Less observations in a regulated (financial or utility) industry	(483)
Less observations without data required to calculate control variables	(948)
Less observations without two consecutive years of complete data	(140)
UTB Sample	2,252

Notes. This table presents our sample selection process for the earnings management via tax accounts analysis and our UTB analysis.

Table 2   CAM-level Descriptive Statistics

CAM Categories	(1) All Companies	(2) Sample Companies	(3) *TaxCamCo* = 1	(4) *TaxCamCo* = 0
Intangibles	537	106	7	99
Revenue	508	90	12	78
M&A	440	73	4	69
Property	381	60	4	56
Taxes	324	60	60	0
Contingent Liabilities	304	58	4	54
Investments	236	26	0	26
Losses	209	3	0	3
Financial Reporting	139	29	4	25
Inventory	98	41	1	40
Disposals	69	0	0	0
Financial Instruments	61	2	0	2
Other	46	5	1	4
Pensions	40	0	0	0
Accounts Receivable	37	5	0	5
Leases	33	9	2	7
Stock Compensation	14	0	0	0
Total CAMs	3,476	567	99	468
Total Companies	2,027	378	57	321

Notes: This table summarizes details of disclosed CAMs. Column (1) presents the categories of CAMs for all companies in the Audit Analytics database as of March 19, 2020 (n = 2,027), Column (2) presents all companies in our sample, and in Columns (3) and (4) we separate our sample into companies with a tax-related CAM (n = 57), and all companies without a tax-related CAM (n = 321). We summarize the categories in Appendix B.

Table 3   Univariate tests of Earnings management via tax expense

Panel A: Five-year sample (n = 4,049)

Percent $TaxEM = 1$	$TaxCamCo = 1$	$TaxCamCo = 0$
Pre-CAM period	0.1233	0.1768
Post-CAM period	0.0973	0.1845
Diff	-0.0260	0.0077
(t-stat)	(-1.03)	(0.46)

Panel B: Two-year sample (n = 1,711)

Percent $TaxEM = 1$	$TaxCamCo = 1$	$TaxCamCo = 0$
Pre-CAM period	0.1582	0.1707
Post-CAM period	0.0973	0.1845
Diff	-0.0609	0.0146
(t-stat)	(-1.74)	(0.70)

Panel C: Two year last chance earnings management sample (n = 756)

Percent $TaxEM = 1$	$TaxCamCo = 1$	$TaxCamCo = 0$
Pre-CAM period	0.3793	0.1902
Post-CAM period	0.1071	0.3066
Diff	-0.2722	0.1134
(t-stat)	(-3.56)	(3.44)

Notes: This table compares *TaxEM* (measured as *PremanagedEPS < AftertaxEPSforecast* and *AftertaxEPS actual ≥ AftertaxEPS forecast*) between *TaxCamCo = 1* and *TaxCamCo = 0* samples in the pre- and post-CAM period. In Panel A, we present details using four years before CAM disclosure and one year of CAM disclosure. In Panel B, we present details using one year before CAM disclosure and one year of CAM disclosure. In Panel C we use our two-year Last chance earnings management sample. All variables are defined in Appendix B.

Table 4   Descriptive Statistics

Panel A. Full sample

Variables	N	Mean	Std. Dev.	P25	P50	P75
TaxCamCo	756	0.1508	0.3581	0.0000	0.0000	0.0000
NonTaxCamCo	756	0.8492	0.3581	1.0000	1.0000	1.0000
ETR4_ETR3	756	-0.0003	0.0463	-0.0106	0.0001	0.0077
Miss	756	0.4735	0.4996	0.0000	0.0000	1.0000
Miss_Amount	756	-0.0012	0.1014	-0.0749	-0.0069	0.0745
Induced_Chg_ETR	756	-0.0008	0.0058	-0.0007	-0.0000	0.0004
Tax_Owed	756	0.0114	0.0805	0.0000	0.0000	0.0269
ETRQ3	756	0.2119	0.0675	0.1827	0.2227	0.2457
NumCams	756	1.5238	0.7428	1.0000	1.0000	2.0000

Panel B. Partitioned sample

Variables		*TaxCamCo = 1*			*TaxCamCo = 0*			
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Diff.	t-stat
TaxCamCo	114	1.0000	0.0000	642	0.0000	0.0000	1.0000	n/a
NonTaxCamCo	114	0.0000	0.0000	642	1.0000	0.0000	-1.0000	n/a
ETR4_ETR3	114	-0.0022	0.0569	642	0.0000	0.0442	-0.0022	0.46
Miss	114	0.4561	0.5003	642	0.4766	0.4998	-0.0205	0.40
Miss_Amount	114	-0.0011	0.1125	642	-0.0013	0.0994	0.0002	-0.02
Induced_Chg_ETR	114	-0.0008	0.0053	642	-0.0008	0.0059	0.0001	-0.09
Tax_Owed	114	0.0346	0.1259	642	0.0073	0.0688	0.0273	-2.36**
ETRQ3	114	0.2037	0.0930	642	0.2134	0.0618	-0.0097	1.42
NumCams	114	1.7368	0.8761	642	1.4860	0.6970	0.2509	-1.91*

Notes: This table presents descriptive statistics for our earnings management sample. In Panel A, we present details of the variables used in Equation (1), and in Panel B, we present descriptives for the companies with a tax-related CAM, and companies without a tax-related CAM. We outline our sample selection in Table 1 and define all variables in Appendix B. *, **, and *** represent significance (two-tailed) at the 0.10, 0.05, and 0.01 levels, respectively.

Table 5   Last Chance Earnings Management

Dependent Variable	(1) Full Sample ETR4_ETR3		(2) TaxCamCo = 1 ETR4_ETR3		(3) TaxCamCo = 0 ETR4_ETR3	
Intercept	0.031	(3.72)***	0.005	(0.36)	0.023	(2.39)**
Miss	0.000	(0.07)	0.032	(1.36)	-0.005	(-0.81)
Miss_Amount	0.056	(1.31)	-0.254	(-2.48)***	0.076	(1.75)*
TaxCamCo	-0.008	(-1.43)				
Post	-0.007	(-2.41)**	0.008	(0.62)	-0.008	(-2.65)***
Post*Miss_Amount	-0.065	(1.97)**	0.213	(3.07)***	-0.071	(-2.16)**
Post*TaxCamCo	0.009	(0.77)				
TaxCamCo*Miss_Amount	-0.203	(-3.80)***				
TaxCamCo*Miss_Amount*Post	0.271	(3.23)***				
Induced_Chg_ETR	2.026	(3.21)***	-1.235	(-1.82)*	2.697	(4.20)***
Tax_Owed	0.008	(0.31)	0.065	(2.35)**	-0.033	(-0.89)
ETRQ3	-0.149	(-4.53)***	-0.114	(1.90)*	-0.105	(-3.13)***
NumCams	0.003	(1.49)	-0.002	(-0.48)	0.005	(2.01)**
Clustering	Company		Company		Company	
N	756		114		642	
Adj. R sq.	0.141		0.092		0.193	

Notes: This table presents the results of our earnings management via tax accounts analysis. In Column (1) we present the results of estimating Equation (1) on our full sample. In Columns (2) and (3), we estimate Equation (1) on the *TaxCamCo* = 1 and *TaxCamCo* = 0 subsamples separately. We outline our sample selection in Table 1 and define variables in Appendix B. *, **, and *** represent significance (two-tailed) at the 0.10, 0.05, and 0.01 levels, respectively.

Table 6   UTB Analysis

Panel A. UTB Sample Descriptive Statistics – Full Sample						
Variable	N	Mean	Std. Dev.	P25	P50	P75
TaxCamCo	2,252	0.1945	0.3959	0.0000	0.0000	0.0000
NonTaxCamCo	2,252	0.8055	0.3959	1.0000	1.0000	1.0000
UTB	2,252	1.1277	1.7621	0.1294	0.5075	1.4095
ΔUTB	2,252	0.0013	0.0059	-0.0003	0.0000	0.0015
CY_Inc	2,252	0.1747	0.4438	0.0000	0.0410	0.1570
PY_Inc	2,252	0.0904	0.2349	0.0000	0.0106	0.0761
PY_Dec	2,252	0.0716	0.2024	0.0000	0.0005	0.0463
Settle	2,252	0.0362	0.1307	0.0000	0.0000	0.0137
SOL	2,252	0.0405	0.0901	0.0000	0.0027	0.0385
FI	2,252	0.0219	0.0481	0.0000	0.0071	0.0383
ΔFI	2,252	0.0003	0.0297	-0.0046	0.0000	0.0037
R&D	2,252	0.0583	0.1107	0.0000	0.0089	0.0609
ΔR&D	2,252	-0.0036	0.0431	-0.0012	0.0000	0.0002
Size	2,252	8.2073	1.5118	7.1726	8.0641	9.1511
ΔSize	2,252	0.1123	0.2385	-0.0095	0.0554	0.1684
PPE	2,252	0.2725	0.2673	0.0856	0.1691	0.3760
ΔPPE	2,252	0.0209	0.1109	-0.0121	0.0059	0.0389
Cash	2,252	0.1719	0.2083	0.0338	0.0891	0.2144
ΔCash	2,252	-0.0091	0.0721	-0.0299	-0.0028	0.0142
EquityInc	2,252	0.0008	0.0046	0.0000	0.0000	0.0000
ΔEquityInc	2,252	-0.0001	0.0028	0.0000	0.0000	0.0000
BTM	2,252	0.4044	0.4260	0.1563	0.3071	0.5446
ΔBTM	2,252	0.0282	0.2252	-0.0551	0.0051	0.0866
Depr	2,252	0.0426	0.0273	0.0249	0.0373	0.0536
ΔDepr	2,252	-0.0006	0.0110	-0.0036	-0.0001	0.0029
SGA	2,252	0.2251	0.2410	0.0685	0.1520	0.2866
ΔSGA	2,252	-0.0128	0.1006	-0.0144	0.0000	0.0081
ROA	2,252	0.0380	0.1734	0.0106	0.0628	0.1128
ΔROA	2,252	0.0011	0.1032	-0.0275	-0.0011	0.0224
CapEx	2,252	0.0450	0.0466	0.0163	0.0301	0.0558
ΔCapEx	2,252	-0.0010	0.0233	-0.0062	0.0000	0.0058
NOL	2,252	0.7700	0.4209	1.0000	1.0000	1.0000
ΔNOL	2,252	-0.0229	0.3398	-0.0138	0.0000	0.0036
SalesGrowth	2,252	-0.0250	0.2247	-0.0745	0.0000	0.0547
CETR	2,252	0.1489	0.2990	0.0140	0.1504	0.2220
ΔCETR	2,252	0.0024	0.4555	-0.0699	0.0000	0.0489
Leverage	2,252	0.3686	0.2920	0.1759	0.3337	0.4949
ΔLeverage	2,252	0.0296	0.2227	-0.0401	0.0018	0.0681
NumCams	2,252	1.6590	0.7926	1.0000	1.0000	2.0000

Panel B. UTB Sample Descriptive Statistics – Partitioned Sample								
		TaxCamCo = 1			*TaxCamCo* = 0			
Variable	N	Mean	Std. Dev.	N	Mean	Std. Dev	Diff.	t-stat
TaxCamCo	438	1.0000	0.0000	1,814	0.0000	0.0000	1.0000	n/a
NonTaxCamCo	438	0.0000	0.0000	1,814	1.0000	0.0000	-1.0000	n/a
UTB	438	1.7300	1.8719	1,814	0.9822	1.7035	0.7478	8.08***
ΔUTB	438	0.0012	0.0069	1,814	0.0013	0.0056	-0.0001	0.39
CY_Inc	438	0.2233	0.4319	1,814	0.1630	0.4459	0.0603	-2.56***
PY_Inc	438	0.1731	0.3267	1,814	0.0705	0.2019	0.1026	-8.33***
PY_Dec	438	0.1317	0.2491	1,814	0.0571	0.1866	0.0746	-7.00***
Settle	438	0.0837	0.2137	1,814	0.0248	0.0976	0.0589	-8.61***
SOL	438	0.0656	0.1225	1,814	0.0345	0.0792	0.0311	-6.54***
FI	438	0.0504	0.0571	1,814	0.0150	0.0429	0.0354	-14.46***
ΔFI	438	-0.0010	0.0326	1,814	0.0005	0.0290	-0.0015	0.95
R&D	438	0.0405	0.0590	1,814	0.0626	0.1195	-0.0221	3.76***
ΔR&D	438	-0.0014	0.0180	1,814	-0.0041	0.0472	0.0027	-1.18
Size	438	8.8877	1.5381	1,814	8.0430	1.4590	0.8447	-10.76***
ΔSize	438	0.0620	0.1840	1,814	0.1244	0.2484	-0.0625	-4.95***
PPE	438	0.2479	0.2415	1,814	0.2784	0.2729	-0.0305	2.14**
ΔPPE	438	0.0202	0.0871	1,814	0.0210	0.1160	-0.0008	0.14
Cash	438	0.1403	0.1496	1,814	0.1796	0.2195	-0.0393	3.55***
ΔCash	438	-0.0165	0.0677	1,814	-0.0073	0.0730	-0.0092	2.40**
EquityInc	438	0.0008	0.0043	1,814	0.0009	0.0047	-0.0001	0.39
ΔEquityInc	438	-0.0002	0.0025	1,814	0.0000	0.0028	-0.0002	1.25
BTM	438	0.3754	0.4882	1,814	0.4114	0.4094	-0.0361	1.59
ΔBTM	438	0.0165	0.2424	1,814	0.0311	0.2208	-0.0146	1.21
Depr	438	0.0428	0.0245	1,814	0.0425	0.0279	0.0003	-0.22
ΔDepr	438	-0.0003	0.0100	1,814	-0.0006	0.0113	0.0003	-0.57
SGA	438	0.1984	0.2048	1,814	0.2316	0.2486	-0.0332	2.59***
ΔSGA	438	-0.0079	0.0599	1,814	-0.0140	0.1081	0.0062	-1.16
ROA	438	0.0793	0.0970	1,814	0.0280	0.1858	0.0513	-5.59***
ΔROA	438	-0.0014	0.0704	1,814	0.0018	0.1096	-0.0031	0.57
CapEx	438	0.0409	0.0407	1,814	0.0460	0.0478	-0.0051	2.05**
ΔCapEx	438	0.0002	0.0162	1,814	-0.0013	0.0247	0.0015	-1.21
NOL	438	0.8288	0.3771	1,814	0.7558	0.4297	0.0730	-3.26***
ΔNOL	438	-0.0145	0.1475	1,814	-0.0249	0.3716	0.0104	-0.58
SalesGrowth	438	-0.0134	0.1692	1,814	-0.0278	0.2361	0.0143	-1.20
CETR	438	0.1641	0.2400	1,814	0.1453	0.3116	0.0188	-1.18
ΔCETR	438	0.0003	0.3685	1,814	0.0029	0.4742	-0.0026	0.11
Leverage	438	0.3697	0.2788	1,814	0.3683	0.2952	0.0014	-0.09
ΔLeverage	438	0.0175	0.1675	1,814	0.0326	0.2341	-0.0150	1.27
NumCams	438	2.0639	0.8479	1,814	1.5612	0.7466	0.5027	-4.31***

Panel C. UTB Regressions

Dependent Variable	(1) ΔUTB		(2) CY_Inc		(3) PY_Inc		(4) PY_Dec		(5) Settle		(6) SOL	
Intercept	0.007	(0.17)	0.102	(4.25)***	0.048	(2.69)***	0.041	(3.21)***	0.023	(2.80)***	0.045	(6.59)***
TaxCamCo	-0.045	(-0.96)	0.077	(2.36)**	0.055	(2.91)***	0.083	(4.01)***	0.057	(3.68)***	0.021	(2.51)**
Post	-0.039	(-1.56)	-0.020	(-1.33)	-0.019	(-1.97)**	0.006	(0.62)	-0.001	(-0.23)	-0.005	(-1.65)*
TaxCamCo*Post	0.105	(1.79)*	-0.002	(-0.05)	0.064	(2.28)**	-0.028	(-1.24)	-0.009	(-0.52)	0.007	(0.80)
ΔFI	1.238	(2.00)**	1.066	(1.95)*	0.271	(1.30)	0.238	(0.91)	-0.061	(-0.56)	0.033	(0.57)
ΔR&D	-1.340	(-2.36)**	-0.680	(-1.40)	-0.333	(-1.57)	0.054	(0.31)	0.047	(0.67)	0.066	(2.40)**
ΔSize	0.639	(5.58)***	0.338	(3.19)***	0.080	(1.83)*	0.017	(0.60)	-0.023	(-1.90)*	-0.022	(-2.62)***
ΔPPE	-0.164	(-0.82)	-0.177	(-1.53)	-0.038	(-0.81)	-0.014	(-0.28)	0.001	(0.02)	-0.019	(-1.24)
ΔCash	-0.228	(-1.09)	-0.097	(-0.58)	-0.202	(-2.52)**	-0.122	(-1.95)*	0.005	(0.12)	-0.020	(-0.81)
ΔEquityInc	6.988	(1.59)	2.765	(0.67)	0.947	(0.89)	-1.033	(-1.00)	-0.207	(-0.19)	0.508	(1.10)
ΔBTM	-0.078	(-1.63)	-0.056	(-1.74)*	-0.041	(-2.20)**	-0.014	(-0.66)	-0.001	(-0.14)	-0.002	(-0.31)
ΔDepr	1.182	(0.63)	-1.599	(-1.12)	0.626	(0.81)	-1.608	(-2.97)***	0.229	(0.69)	0.567	(3.09)***
ΔSGA	-0.237	(-0.98)	-0.119	(-0.48)	0.007	(0.11)	0.022	(0.21)	0.026	(1.44)	0.017	(1.05)
ΔROA	-0.072	(-0.25)	0.326	(1.94)*	-0.017	(-0.20)	0.193	(1.76)*	-0.018	(-0.90)	0.018	(0.99)
ΔCapEx	-0.147	(-0.28)	-0.47	(-0.11)	-0.167	(-0.62)	0.240	(1.30)	-0.083	(-1.10)	0.030	(0.55)
NOL	0.036	(1.44)	0.056	(3.33)***	-0.007	(-0.55)	0.011	(1.07)	-0.008	(-1.28)	-0.005	(-0.88)
ΔNOL	0.162	(1.77)*	0.131	(1.50)	0.020	(0.95)	0.021	(0.72)	-0.019	(-1.09)	0.000	(0.09)
SalesGrowth	-0.027	(-0.27)	-0.075	(-0.95)	0.019	(0.63)	-0.023	(-0.74)	0.010	(0.81)	-0.009	(-1.31)
ΔCETR	-0.023	(-0.78)	-0.027	(-1.10)	-0.004	(-0.69)	-0.011	(-1.30)	0.002	(0.46)	-0.003	(-1.42)
ΔLeverage	0.010	(0.07)	0.108	(0.84)	-0.036	(-0.76)	0.059	(1.55)	0.023	(1.54)	0.004	(0.52)
NumCams	0.023	(1.19)	-0.010	(-0.87)	0.019	(2.31)**	0.001	(0.15)	0.007	(2.13)**	0.000	(0.10)

	(1)	(2)	(3)	(4)	(5)	(6)
Fixed Effects	Industry	Industry	Industry	Industry	Industry	Industry
Clustering	Company	Company	Company	Company	Company	Company
N	2,252	2,252	2,252	2,252	2,252	2,252
Adj. R sq.	0.080	0.083	0.046	0.041	0.031	0.037

Notes: This table presents descriptive statistics and results for our UTB analysis. In Panel A, we present descriptive statistics of the variables used in Equation (2) on our full sample, and in Panel B, we present descriptives separately for the companies with and without a tax-related CAM. In Panel C, we present the results of estimating Equation (2) using the change in the UTB balance and components of the UTB rollforward as our dependent variables. We outline our sample selection in Table 1 and define all variables in Appendix B. *, **, and *** represent significance (two-tailed) at the 0.10, 0.05, and 0.01 levels, respectively.

Table 7   Five-year Sample

Panel A. Last Chance Earnings Management

Dependent Variable	ETR4_ETR3	
Intercept	0.055	(5.60)***
Miss	-0.002	(-0.35)
Miss_Amount	0.122	(1.98)**
TaxCamCo	0.014	(2.64)***
Post	-0.008	(-2.11)**
Post*Miss_Amount	0.084	(0.99)
Post*TaxCamCo	-0.011	(-0.91)
TaxCamCo*Miss_Amount	-0.331	(-2.63)***
TaxCamCo*Miss_Amount*Post	0.657	(2.66)***
Controls	Yes	
Clustering	Company	
N	1,655	
Adj. R sq.	0.113	

Panel B. UTB Regressions

	(1)		(2)		(3)		(4)		(5)		(6)	
Dependent Variable	ΔUTB		CY_Inc		PY_Inc		PY_Dec		Settle		SOL	
Intercept	0.033	(0.97)	0.138	(6.89)***	0.068	(4.66)***	0.083	(2.80)***	0.039	(5.06)***	0.044	(7.30)***
TaxCamCo	0.045	(1.51)	0.098	(4.23)***	0.078	(5.16)***	0.068	(4.56)***	0.040	(4.97)***	0.020	(3.43)***
Post	-0.043	(-1.39)	-0.038	(-2.45)**	-0.029	(-2.61)***	-0.021	(-2.04)***	-0.013	(-2.37)**	0.000	(0.08)
TaxCamCo*Post	-0.009	(-0.16)	-0.029	(-1.24)	0.056	(1.94)*	-0.004	(-0.23)	0.012	(0.82)	0.010	(1.15)
Controls	Yes		Yes		Yes		Yes		Yes		Yes	
Fixed Effects	Industry		Industry		Industry		Industry		Industry		Industry	
Clustering	Company		Company		Company		Company		Company		Company	
N	5,080		5,080		5,080		5,080		5,080		5,080	
Adj. R sq.	0.090		0.082		0.043		0.028		0.029		0.036	

Notes: This table presents additional analysis replacing our main sample with a five-year sample that includes four years before CAM disclosures and one year of CAM disclosure. In Panel A, we present the results of Equation (1) on this expanded sample, and in Panel B, we present the results of Equation (2) using the change in the UTB balance and components of the UTB rollforward as our dependent variables. We outline our sample selection in Table 1 and define all variables in Appendix B. *, **, and *** represent significance (two-tailed) at the 0.10, 0.05, and 0.01 levels, respectively.

Table 8 - Two-year Sample Including Large-Accelerated Filers without CAMs and Smaller Filers

Panel A. Last Chance Earnings Management

Dependent Variable	ETR4_ETR3	
Intercept	0.040	(4.94)***
Miss	-0.005	(-0.93)
Miss_Amount	0.061	(1.80)*
TaxCamCo	-0.010	(-1.68)*
Post	-0.005	(-1.52)
Post*Miss_Amount	-0.057	(-1.93)*
Post*TaxCamCo	0.012	(1.07)
TaxCamCo*Miss_Amount	-0.189	(-3.67)***
TaxCamCo*Miss_Amount*Post	0.292	(3.96)***
Controls	Yes	
Clustering	Company	
N	982	
Adj. R sq.	0.085	

Panel B. UTB Regressions

Dependent Variable	(1) ΔUTB		(2) CY_Inc		(3) PY_Inc		(4) PY_Dec		(5) Settle		(6) SOL	
Intercept	0.012	(0.39)	0.077	(4.32)***	0.032	(2.37)**	0.024	(2.83)***	0.014	(2.66)***	0.030	(5.72)***
TaxCamCo	-0.076	(-1.50)	0.075	(2.40)**	0.064	(3.46)***	0.089	(4.63)***	0.054	(3.94)***	0.027	(3.30)***
Post	-0.025	(-1.27)	-0.016	(-1.61)	-0.006	(-0.87)	0.006	(1.13)	-0.001	(-0.24)	-0.003	(-1.22)
TaxCamCo*Post	0.100	(1.43)	-0.004	(-0.10)	0.054	(1.97)**	-0.027	(-1.28)	-0.006	(-0.36)	0.007	(0.70)
Controls	Yes		Yes		Yes		Yes		Yes		Yes	
Fixed Effects	Industry		Industry		Industry		Industry		Industry		Industry	
Clustering	Company		Company		Company		Company		Company		Company	
N	3,870		3,870		3,870		3,870		3,870		3,870	
Adj. R sq.	0.046		0.054		0.035		0.029		0.031		0.029	

Notes: This table presents additional analysis expanding our main sample to include large-accelerated filers without a reported CAMs and smaller filers. In Panel A, we present the results of Equation (1) on this expanded sample, and in Panel B, we present the results of Equation (2) using the change in the UTB balance and components of the UTB rollforward as our dependent variables. We outline our sample selection in Table 1 and define all variables in Appendix B. *, **, and *** represent significance (two-tailed) at the 0.10, 0.05, and 0.01 levels, respectively.