The Influence of Incentives presented by the Desire to Meet and Beat Analysts` Forecasts on the Likelihood of CAMs Disclosure.

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Abstract: I examine whether the perverse incentives inducing environment of just meeting and beating analysts' forecasts increases the likelihood of an audit report including a Critical Audit Matters disclosure (CAMs). The CAMs disclosure is arguably the largest mandatory expansion to the GAAP report in the last couple of decades and its informativeness is of potential interest to both financial information users and policymakers. Using a sample of firms from 2019 onwards, I originally find a negative correlation between a firm just meeting their benchmarks and the likelihood of a CAM being disclosed. However, I find this relation to become positive once only certain CAMs which are more likely to be reflective of managerial opportunism are considered. These findings hint at the information usefulness of the CAMs extension in detecting managerial opportunism stimulated by the pressure to meet analysts' forecasts.

Keywords: CAMs disclosure, managerial opportunism, analyst forecasts

1. Introduction

As of 2019, the Public Company Accounting Oversight Board of the US (from here on referred to as PCAOB) requires that critical audit matters (CAMs) are disclosed. An auditor is obligated to indicate CAMs if given disclosures or accounts are material and demand particularly complex, subjective and/or challenging judgment from the accountant (PCAOB, 2019). As per new regulation: upon formulating a given CAM, the auditor is to identify the CAM, then describe the principal considerations which lead to said identification, describe how the CAM is addressed in the report, and finally refer to the relevant financial statement accounts or disclosures that relate to the CAM. Policymakers motivate the CAMs expansion with improved informativeness of extended financial reporting to potential users. (PCAOB, 2017). CAMs are found to most often be reported in relation to intangibles, revenue, and mergers & acquisitions (Burke, 2023).

The CAMs extension produced different reactions from various parties of concern. According to the comment letters from stakeholders received by the Board on the matter, CAMs do provide insightful information which directly influences the decision-making process and warns prospect users of noteworthy issues within financial statements (PCAOB, 2017).

There is substantive evidence present which reinforces the information relevancy of CAMs disclosures. Accounts which are mentioned in CAMs are less trusted by experimental participants (Kachelmeier, 2020). One can observe that companies wgich forfeit a CAM disclosure are less likely to enjoy investment opportunities than their peers with a traditional audit report (Rapley et al., 2021) and investors are more likely to alter their investment strategies in face of auditors' CAMs disclosure rather than a voluntary managerial disclosure, as auditors are viewed as sources of opinion that are more independent and therefore — reliable (Christensen et al., 2014).

Furthermore, most recent research suggests that both managers and auditors anticipate CAMs auditing procedures, understand their significance to potential users and adjust their disclosing behaviour accordingly, which can indirectly benefit investors via improved auditor involvement (Burke et al., 2023).

Out of all parties concerned, it seems as though managers treat the new extended disclosures with utmost caution. There is good reason for this care. Managers often have incentives to attract the attention of potential investors, capital and promote firm growth, all of which can be hindered by CAMs triggered scrutiny from concerned parties. The purpose of this thesis paper is to investigate a yet another reason for managers and those to whom managerial behaviour is of interest to view CAMs disclosure as a highly relevant signal to consider. More specifically, research conducted within my paper is on the relationship between the tendency of firms to meet/beat earnings forecasts and CAMs. The 2019 CAMs extension to US GAAP presents researchers with an opportunity to further study the nature of the "meet/beat forecasts" management inducing environment and the ways in which one can observe it. The extent to which actions managers faced with perverse incentives of the environment undertake can trigger CAMs disclosure is to be of interest to policymakers who argue for additional mandatory disclosure and take worry of the potential harm said environment can bring to various stakeholders, hence the goal of my research effort is to examine the relationship between CAMs disclosure and the propensity of firms to meet

or just beat forecasts. My research aims to elaborate on the informativeness of CAMs disclosure and contribute to the existing literature on the influence of forecasts on managerial behaviour, additional mandatory disclosure, and the usefulness of CAMs disclosure in particular.

My research design employs a series of logit statistical regressions. My primary empirical results demonstrate a statistically significant and negative relationship between firms just meeting/beating forecasts and CAMs being disclosed for a given firm/year. My additional tests, however, hint at a positive relationship between just meeting/beating forecasts and CAMs of certain categories which are more likely to reflect either real or earnings management (later referred to as *"Suspected_CAMs"*). My original results show that CAMs in general are unlikely to be positively related to managerial opportunism. Simultaneously, my additional tests show that CAMs of certain categories are likely to signal "hasty management" induced by the desire to meet forecasts. Both of these findings are relevant to policymakers, managers and all potential users of the information presented within the CAMs extension.

The rest of this paper is structured as follows: Section 2 provides a broad theoretical foundation on the informativeness of CAM disclosure on the meet & beat forecasts environment and presents the hypothesis, Section 3 formulates the empirical design of this research effort, Section 4 documents the results of both primary and additional statistical testing and Section 5 concludes.

2. Literature Review and Hypothesis Development

2.1. Origins of Perverse Incentives

Not only do many firms employ compensation schemes which reward chief executive officers (CEOs) and chief financial officers (CFOs) for successfully beating analysts' forecasts, capital markets tend to punish firms that do not meet expectations via decrease in stock price, which naturally greatly concerns managers (Jensen, 2005). If a given company fails to arrive at a certain threshold of performance, it's managers can only resort to a limited range of activities they can undergo to influence the situation.

Such an environment presents executives with perverse incentives to resort to earnings management and/or aggressive real management in order to either avoid reputational costs for not meeting expectations or to enjoy a compensation bonus that is aligned with their company confidently beating forecasts. Rather unsurprisingly, one may observe the influence of the aforementioned perverse incentives on managerial behaviour in practice.

In their study of narcissistic executives' promptness to manage earnings under pressure Lin et al. (2020) demonstrate empirical results suggesting that CEOs engage in earnings management to fulfil positive earnings thresholds and analysts' forecasts. Similarly, using data on year-end effective tax rate manipulations Beardsley et al. (2021) find evidence of managers considering analyst forecasts to adjust their earnings management strategy. Quite often there are negative consequences to such behaviour, for both firms and stakeholders. Research of Chi (2009) infers a positive relationship between earnings management and overvalued equity and a negative relationship with future abnormal stock returns and operating performance.

Alternatively, real activities management is a strategy that managers under the influence of the

discussed perverse incentives may choose to pursue. Oftentimes, managers engage in such real earnings management as: sales manipulation, inventory overproduction, discretionary expenditures reduction and COGS decreases, with hopes of beating forecasts (Roychowdhury, 2016). In a somewhat similar fashion to regular earnings management — real earnings management can be harmful to firm value. Francis et al. (2016) infer a positive relationship between aggressive real activities management and higher risk of subsequent stock price crashes. Perhaps, most alarming are the findings of Caskey et al. (2017), which capture a rather harmful manifestation of managerial opportunism in the form of firms` propensity to push their employees towards higher rates of illness and physical injury when they just beat or meet analysts` forecasts. On the basis of scientific literature mentioned (and all other relevant research conducted, although not listed here) one must recognize the dangerous nature of the business environment which is formed under the pressure of the aforementioned perverse incentives to meet and beat forecasts. The actions undertaken by managers put in situations of such kind can bring very real harm to both shareholders, firm value, and other stakeholders both in the short-run and subsequently.

2.2 Hypothesis Development

As is previously mentioned in this text: most CAMs are found to be triggered by either abnormal, unexpected, or elsehow complicated financial reporting on intangibles, revenue, and M&A (Burke, 2023). Opportunistic managers who resort to earnings management, when eager to just beat or meet forecasts may resort to earnings management which involves meddling with revenues, for example shifting income from the future period to the current one unjustifiably (Chi, 2009). If most relevant information is available to the auditor, many instances of earnings management of this kind are likely to trigger a CAMs investigation.

Similarly, the actions of managers that choose the strategy of real activities management are likely to be detected by CAMs procedures. If due to attempts of aggressive real management, opportunistic managers conduct sales manipulations (which will affect revenue) or swiftly reduce R&D discretionary expenditures, such behaviour is also likely to be deemed as uncommon and attract the attention of an auditor who is CAM liable (a common practice as found by Roychowdhury, 2016). Mergers and Acquisitions which are often triggers of CAMs investigations have also been observed to stimulate managerial opportunism in a fashion similar to analyst' forecasting incentives. Erickson & Wang (1999) find evidence of acquiring firms managing earnings upward in the periods prior to the merger agreement.

Considering the claimed (by PCAOB) information relevancy of CAMs disclosure and its role in financial accounting at the moment, CAMs investigation should be triggered within many audits of firms lead by opportunistic managers. As is outlined previously in my text, managerial opportunism stimulates earnings management, real activities management and generally "hasty" management that is likely to be reflected in the financial statements. Financial statements of firms lead by opportunistic managers should be more likely to include unexpected results, uncommon interpretations, complex information, and information content that is more likely to demand subjective evaluation from an auditor, hence require CAMs disclosure.

Subsequently, if managerial opportunism is promoted by the desire to beet or meet analysts' forecast, one should be able to observe a positive relationship between the extent to which managers are influenced by these incentives and triggered CAMs.

Given reasoning in the paragraph above, the following hypothesis is formulated:

H1: *Firms that just meet or beat analysts' EPS forecasts are more likely to have CAMs.*

3. Sample Selection and Research Design

3.1. Generating the "Meet" independent variable.

In order to capture the perverse incentives inducing environment of just meeting analysts' forecast an indicator variable is constructed. The dependent variable *CAMs* is set to one if the firm has CAMs disclosed in its auditor's report in a given year. The independent variable *Meet* is set to one if a firm just meets/beats analysts' consensus forecasts in a given year. Previous studies, such as Caskey et al. (2017) and Edmonds et al. (2018) construct similar "JustMeet" independent variables which are equal to one if the difference between real and forecasted EPS is one or two cents, however, I choose to extend the interval to a difference of five cents. I believe that this deviation, although is somewhat threatening to my tests' precision, is nevertheless justified. Unlike most previous studies employing a similar dummy, I only have 4 years' worth of observations at my disposal (CAMs became mandatory in 2019), and a sample with a *Meet* interval of only one or two cents would arguably contain too few observations of interest. With the difference of 5 cents for a *Meet* variable that I choose to pursue, my final sample has 24.42% of all observations holding a *Meet* indicator value of one. I believe this minor deviation allows for better statistical testing.

3.2. Sample Selection

Data relied upon within this study is collected from Audit Analytics, COMPUSTAT and I/B/E/S respectively. The dependent variable I analyse (CAMs) is extracted from Audit Analytics. The independent variable is constructed with aid of earnings and forecasts data obtained from the I/B/E/S summary files. The aforementioned Audit Analytics and COMPUSTAT databases are employed to generate the necessary control variables. Most controls available for analysis were collected on an annual basis, therefore data on EPS is also limited to one firm observation per year. I extract the latest performance period per year and treat it as an annual observation. I consider this simplification to be a reasonable one, as most firms have targets set at the end of the calendar year (also in line with previous studies). Most performance related compensation (one of the key drivers of managerial opportunism) is also typically assigned in December. The only other "annualized" variable is the *MTB* (market to book value) control variable from COMPUSTAT. An average of quarterly observations per year is generated and treated as an annual figure.

The rest of the data employed is annual by design. As the CAMs extension only became mandatory in 2019, my sample only contains observations from years 2019 up until 2022 (4 years), due to the

fact that at the time of examination the year 2023 is not yet completed. I do not remove duplicates from the Audit Analytics data frame as in a given firm year it is possible that a firm triggered more than one disclosure of the same kind, but those instances were separate, nonetheless, hence are of interest to my analysis. Instead, I carefully make sure that the original data on CAMs is not affected by the data joining process and values remain original via attentive cross referencing.

All Audit Analytics data is merged via CIK codes and years. Annual COMPUSTAT data is joined via CIK codes and years while originally quarterly COMPUSTAT data is joined via years and gvkeys. I/B/E/S data is joined via years and official tickers. Observations which do not contain EPS data are removed. For readers' convenience, the method of obtaining the final sample is summarized in Table 1.

Table 1. Sample Selection Procedure						
Steps in Data	Data-Frame	Data of Interest	Merged	N prior to	N post-	
Formulation	imported		with	Merge	Merge	
1	Audit Analytics	Audit Fees/Auditor info	x	Х	42`996	
2	A.A. CAMs data	Critical Audit Matters	Audit Analytics	42`996	60`4041*	
3	COMPUSTAT	Financial Information	A.A. CAMs	61`232	47`720	
4	I/B/E/S	EPS forecasts/real	COMPUSTAT	29`583	23`2762*	
5	COMPUSTAT/qrt.	Book to Market ratio	I/B/E/S	19`425	16`659	
		Final Sample:	16`659 obs	ervations of 14	4 variables	
	 *1 – at stage 2 of data formulation a left-join is used in order to avoid losing any observations from Audit Analytics that do not include CAMs data but do include potentially relevant audit-related data. *2 – at stage 4 of data formulation observations with a difference of above 10 dollars between EPS real and forecasts are removed. I consider such firm-years to be outliers as rarely do firms enjoy unexpected negative/positive profits of such magnitude. In accordance with this assumption, 244 firm-year observations 					

The final sample contains 16`659 observations of 14 variables. The data within the final sample on all continuous variables is winsorized at 1% level.

3.3. Research Design

3.3.1. The Logit-Regression

In order to capture the relationship between the incentive inducing environment of just meeting or beating analysts' forecasts and CAMs I employ two dummy variables: an independent and a dependent variable. I construct a *Meet* variable, which is to capture the perverse incentives inducing environment of just meeting EPS forecasts. In a firm-year, if the actual earnings are exactly the same as analysts forecast (as obtained from I/B/E/S) or 5 cents above, the observation is assigned a value of 1 for the *Meet* dummy, else 0. Similarly, if in a given firm-year a CAM has

been reported, the CAMs dummy (the dependent variable in my analysis) is assigned a value of 1, else 0.

As I am interested in the increase in likelihood of CAMs being reported given that a firm is subject to the perverse incentives inducing environment of just meeting benchmarks, I employ a logit regression which is to estimate the log-odds of CAMs occurring given that *Meet* equals one. Considering the set-up variables and my hypothesis, the following regression is utilized:

Logit (CAMs) =log(odds of CAMs equals one) =
$$\alpha_0 + \beta_1 Meet + \beta Controls + \varepsilon$$
 (1)

4. Empirical Results

4.1 Descriptive statistics

Table 2 contains the summary statistics for variables used in my analyses. All variables contain 16'659 firm-year observations across 4 years (2019-2022) and a total of 3'632 firms. Apart from the dependent variable – CAMs and the independent variable – Meet, twelve control variables are employed. As was already mentioned in Section 3, the independent variable assumes the value of one for roughly 24% of all observations. The dependent variable equals one for roughly 64% of the final sample.

Panels A and B of Table 2 display the descriptive statistics for both the variables of interest and all the controls. Within my sample, both the *Big4* and *Busy* dummies' means are significantly larger than 0.5, implying that most of the firms within the sample are likely large and are being audited by one of the "big 4" auditing firms with fiscal years ending in December. Similarly, the mean for the dummy of Loss hints at the fact that most firms examined are profitable. The assumption is reinforced by the statistic of NI, the mean value for which is positive. Not unexpectedly, few firmyears include restatements as per the variable Rects. Unsurprisingly, about 1-2 analysts (as per the variable Analysts) follow a firm year. The control variable of Horizon has max/min values of 99 and 10 days respectively and a mean value of roughly 48 days, implying that the average firm-year within the sample enjoys the last forecasting date before the earning announcement date at somewhat around a month and a half apart. Unlike for many prior studies, the mean for the ROA control variable is not slightly positive, but slightly negative at -0.04. The median statistic, however, for the variable of ROA is in fact positive at 0.016. Moreover, the slightly negative mean of ROA can, perhaps, be explained by the COVID-19 world economic crisis, which occurred during the period of observation. Lastly, the statistics for logged audit fees (AF LN), Leverage, Size and BTM are all rather similar to prior studies (Albring et al., 2023), with only the mean for BTM being slightly lower than in prior literature's tests, but nevertheless positive.

Panel C of Table 2 demonstrates the correlations of all variables employed. As the relationship between the dependent/independent variable is discussed more in detail later in this text, now I must only mention that the correlation between them is negative, contrary to expectations outlined by me in the previous sections. Most of the correlation coefficients between control variables are

lower than 0.3, with some exceptions relating to variables *AF_LN*, *Size*, *Loss*, and *Analysts*, with the highest correlation being between *AF_LN* and *Size* at 0.81.

These statistics are not particularly surprising, considering that all these variables somewhat represent "firm-size", especially the last two variables mentioned (firms with many assets are assigned relatively higher audit fees). Having all considerations in mind I recognize few concerns for multicollinearity and therefore proceed with multivariate regressions on my final sample as per my empirical model outlined in Section 3.

Panel A: The variable of interest						
Variable	Ν	Mean	St. Dev.	Min	Max	
CAMs	16` 659	0.64	0.48	0	1	
Meet	16` 659	0.19	0.39	0	1	
Panel B: Control	Variables					
Size	16` 659	7.87	2.20	2.62	13.23	
Loss	16` 659	0.33	0.47	0	1	
NI	16` 659	739. 58	2`475.33	-1`260.36	17`937.00	
Analysts	16` 659	1.82	0.94	0	3.47	
Leverage	16` 659	0.25	0.22	0	0.99	
ROA	16` 659	-0.04	0.23	-1.22	0.27	
Busy	16` 659	0.77	0.42	0	1	
Big4	16` 659	0.76	0.43	0	1	
AF_LN	16` 659	14.49	1.28	11.13	17.66	
Rects	16` 659	0.03	0.16	0	1	
Horizon	16` 659	47.69	17.78	10	99	
BTM	16` 659	0.52	0.48	0	2.62	

Table 2. Descriptive Statistics for	Variables Used in Audit Quality Analyses
anal A. The variable of interest	

Panel A provides descriptive statistics for the dependent/independent variables, Panel B provides descriptive statistics for the control variables.

Panel C			14						
Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CAMs	(1)								
Meet	(2)	-0.08							
Size	(3)	0.22	0.01						
Loss	(4)	-0.64	-0.04	-0.49					
NI	(5)	0.11	-0.01	0.5	-0.26				
Analysts	(6)	0.12	0.06	0.63	-0.21	0.34			
Leverage	(7)	0.05	-0.01	0.13	0.01	-0.01	0.20		
ROA	(8)	0.11	0.06	0.52	-0.63	0.19	0.26	0.11	
Busy	(9)	0.09	-0.01	0.05	0.06	0.01	-0.02	-0.02	0.11
Big4	(10)	0.09	-0.01	0.46	-0.15	0.16	0.49	0.26	-0.02
AF_LN	(11)	0.19	0.01	0.81	-0.31	0.47	0.63	0.25	0.26
Rects	(12)	-0.21	0.01	-0.05	0.03	-0.02	-0.05	-0.02	0.25
Horizon	(13)	-0.11	-0.07	-0.65	0.45	-0.30	-0.45	0.03	-0.02
BTM	(14)	-0.05	-0.03	0.17	-0.05	-0.01	-0. 23	-0.19	0.03
		(9)	(10)	(11)	(12)	(13)	(14)		
Busy	(9)	-0. 10							
Big4	(10)	0.23	-0						
AF_LN	(11)	0.39	-0	0.61					
Rects	(12)	-0.13	-0	-0	-0.05				
Horizon	(13)	-0.44	0.04	-0.3	-0.42	0.02			
BTM	(14)	0.04	0.09	-0.1	-0.03	0.02	-0.08		
]	Panel C of	Table 2 rep	ports on the	e correlatio	on of variab	les with ea	ch other.	
				[End of	Table 2]				

Table 2:	Correlation	Matrix
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4.2 Multivariate regression analyses results

Table 3 reports the multivariate regression results of Model (1) from Section 3. The first two columns display the results of the regular logit model, while the latter two columns both report the results of binomial-logit testing. Columns labelled as "reduced" demonstrate the results of multivariate regressions which only include those control variables which proved to be statistically significant for the original multivariate tests.

Across the multivariate regression results- the estimates for the control variables of *Loss*, *NI*, *Leverage* and *ROA* remain statistically insignificant, unlike every other control employed and their respective estimates. Apart from the four variables mentioned above, no other control estimate is less significant than at a level of p<0.01. Across all the outcomes observed, no estimate for a given variable changes sign. The largest negative contributor to the likelihood of a CAM being equal to one appears to be *Rects*, implying that a firm that has not misstated within their financial statements in the last two years is much less likely to have a CAMs disclosure be triggered for the audit performed on their statements in a given year. Simultaneously, the largest positive contributor to the likelihood of a CAM being disclosed amongst all controls appears to be the variable of *Busy*.

	Table 3: Regression on the CAMs factor: Results				
Variable	(1)	(2)	(3)	(4)	
Intercept	-2.695***	0.010	-2.695***	-2.678***	
	(-0.315)	(0.061)	-0.315	(0.303)	
Meet	-0.100***	-0.099***	-0.473***	-0.473***	
	(0.009)	(0.009)	(0.043)	(0.043)	
Size	0.060***	0.060***	0.289***	0.290***	
	(0.004)	(0.004)	(0.020)	(0.018)	
Loss	-0.008	-	-0.021	-	
	(0.010)	-	(0.050)	-	
NI	-0.000003	-	0.000003	-	
	(0.000001)	-	(0.00001)	-	
Analysts	-0.040***	-0.041***	-0.199***	-0.200***	
	(0.006)	(0.006)	(0.028)	(0.027)	
Leverage	-0.015	-	-0.086	-	
	(0.017)	-	(0.084)	-	
ROA	0.002	-	-0.035	-	
	(0.021)	-	(0.099)	-	
Busy	0.083***	0.082***	0.396***	0.397***	
	(0.008)	(0.008)	(0.040)	(0.040)	
Big4	-0.042***	-0.040***	-0.205***	-0.214***	
	(0.011)	(0.011)	(0.052)	(0.051)	
AF_LN	0.020***	0.018***	0.105***	0.102***	
	(0.006)	(0.006)	(0.028)	(0.027)	
Rects	-0.593***	-0.593***	-4.635***	-4.633***	
	(0.022)	(0.022)	(0.359)	(0.359)	
Horizon	0.001***	0.001***	0.005***	0.005***	
	(0.0003)	(0.0003)	(0.001)	(0.001)	
BTM	-0.123***	-0.121***	-0.574***	-0.572***	
	-0.009	(0.008)	(0.042)	(0.041)	
Number of obs.	16`659	16`659	16`659	16`659	
Null deviance	3`833.4	3`833.4	21`751	21`751	
Residual deviance	3`397.1	3`398	19`692	19`694	
AIC	20`818	20`815	19`720	19`714	

This table reports the logit regression results of the Meet independent variable and the relevant controls on the likelihood of a firm-year including a CAMs disclosure. If in a given firm-year a CAM is reported, the dependent variable is assigned the value of one. *Meet* equals one if in a given year a firm just beats analyst consensus forecasts from I/B/E/S summary files by 5 cents or less. Column (1) reports on the Logit model, column (2) reports on the Logit(reduced model), column (3) reports on the Logit-binomial model and column (4) reports on the Logit-binomial(reduced) model respectively. *, **, *** indicate statistical difference from zero (two-tailed) at the <0.10, <0.05, and <0.01 levels, respectively. The obtained statistics

Both these observations are not particularly surprising. Financial audits of firms who misstate less are expected to include less CAMs and firms which are audited during the busy season are expected to demand a higher level of subjective evaluation from an auditor given the relative shortage of time available per audit conducted.

Contrary to the predictions made by me in the previous sections, the coefficient of interest is negative and at a highly significant statistical level of p < 0.01 across all regressions. This outcome persists across both logit, logit-binomial and the reduced models hinting at a negative relationship between a firm just meeting or beating analysts` forecasts in a given year and the odds of a firm triggering CAMs reporting by their auditor. Such outcomes rule against my original hypothesis, as the likelihood of a critical audit matter being reported decreases given that a firm just beats forecasts.

There are various interpretations of such results which one must consider. Firstly, given the inherent nature of a CAMs disclosure, firms that severely over- or underperform in relation to expectations might attract higher levels of scrutiny from auditors via the extension. Auditors are often wary of short-term deviations from long term trends in relation to most accounts. Therefore, firms which demonstrate unexpectedly high or low earnings appear to be somewhat more "suspicious" to the accountants and the CAMs extension is one channel through which those performing the audit can exercise their suspicion. Naturally, if significantly deviating from expected earnings is to increase the odds of triggering CAMs, then just meeting or beating the benchmarks will have the opposite effect on the likelihood. Secondly, theory developed by me in the previous sections draws a direct link between the various manifestations of either real or financial earnings management when faced with incentives to meet forecasts and Critical Audit Matters in general. One must consider that not all accounts that can trigger a CAMs disclosure during an audit are at all related to "hasty" management. In fact, while particular CAMs categories such as (but not limited to) "Inventory" and "Uncertain tax positions" can be expected to often be triggered by managerial opportunism, it is very unlikely that a CAMs disclosure of the category "Related party transactions" (f.e.) will often reflect manifestations of managerial opportunism as neither form of "hasty" management can realistically occur within related accounts. Table 1B within the appendix briefly reports on the ten CAMs categories that intersect most/least with a firm just meeting or beating consensus forecasts in a given year. The respective rankings within the table somewhat reflect the reasoning I outline in this paragraph, with accounts that are generally more likely to be related to either real of financial earnings management mostly having a relatively higher rate of "intersection" between CAMs and Meet. In the next subsection I put an emphasis on this consideration and perform additional testing on those categories of CAMs which I suspect to be most reflective of "hasty" management. Lastly, the current sample only has 4 years' worth of observations, a nuance which forced me to slightly deviate from the benchmark range of previous studies (an adjustment necessary for obtaining

statistically significant results). I expect similar testing by future researchers to produce results of higher accuracy in face of larger samples on both CAMs and earnings.

4.3 Additional Analyses

4.3.1 CAMs_Suspect

In an attempt to further examine the ability of the CAMs extension to detect managerial opportunism I construct a new dependent variable – $CAMs_Suspect$. Unlike CAMs, $CAMs_Suspect$ takes the value of one only if a firm-year observation possesses a CAMs observation of one of the categories I see reason to believe are somewhat reflective of managerial opportunism. This testing attempt appears to be a reasonable one as many of CAM types, such as "Warranty liabilities" or "Derivatives and hedging" (amongst many others) are rather unlikely to ever be triggered by the actions of "hasty" managers whose behaviour under the perverse incentives of just beating analysts` forecasts are of interest to my analyses. Therefore, a new dependent variable which is more likely to be affected by either real or earnings management is constructed. The rationale behind the formulation of $CAMs_Suspect$ is briefly summarized within Table 2B in the Appendix.

4.3.3 CAMs_Suspect regression on the final sample

Firstly, I employ the same regression as described in section 3.3.1, but with *CAMs_Suspect* as the dependent variable. Therefore, the following logit model is employed:

$$Logit (CAMs_Suspect) = \alpha_0 + \beta_1 Meet + \beta Controls + \varepsilon$$
(2)

Such testing is to provide with an estimate of the likelihood of a "suspected" CAM being disclosed given that in a given year a firm just meets of beats analysts` consensus forecasts by 5 cents or less.

4.3.3 CAMs_Suspect regression on a reduced sample

Additionally, I employ the same regression as reported in section 4.3.2, but on a reduced sample. From the final sample used in previous sections, I remove all firm-year observations which do not intersect with a CAMs observation. The resulting sample contains 10`679 observations. Such testing is to provide with an estimate of the likelihood of "suspected" CAMs being disclosed given that in a given year a firm just meets of beats analysts` consensus forecasts by 5 cents or less and the observation holds a value of one for the original dependent variable *CAMs*. The odds obtained are to be informative on the likelihood of a firm to trigger "suspected" CAMs disclosure over a "non-suspected" one. I expect firms that just meet or beat analysts forecast to be more likely to trigger "suspected" CAMs than "non-suspected" CAMs.

4.2.4 Interpreting the Results of additional testing.

The results of additional testing on both the full and the reduced samples are reported on the next page in Table 4 and Table 5 respectively.

Regressions performed on the reduced sample with the new dependent variable produce statistically significant estimates for the control variables of *Loss* and *NI* (unlike the primary empirical results). Estimates for the variables *Size, Big4, Rects, Analysts* and *BTM* change sign and remain statistically significant at 1% level. The *Big4* estimate appears to be the largest contributing positive control variable within the new regression results, while *Busy* appears to have the largest negative control estimates. These estimations imply that firms audited by one of the big4 companies are more likely to have a "suspected" CAM detected and that a company which is audited during the busy season is less likely to have a "suspected" CAM disclosed in relation to its financial statements respectively. The latter observation is somewhat surprising as there is no particularly straightforward rationale as per why such an influence would be present. One may perhaps assume that firms audited during the busy season have less resources allocated to the investigation of accounts linked to either earnings or real management, however the true nature of this observed relationship is not entirely clear.

In line with my expectations on the outcome of additional testing, the coefficient of interest for the independent variable *Meet* is positive across all additional tests and their respective regressions. Models employing the dependent variable of *CAMs_Suspect* on the original final sample produce positive, but statistically insignificant results while the results of regressions performed on the reduced sample provide positive outcomes at a highly significant statistical level of p<0.01. This finding suggests that during their audit process, out of firms that trigger the CAMs extension, those firms which just meet or beat analysts' forecasts are more likely to have a CAMs disclosure that is more likely to be related to channels through which managerial opportunism can manifest itself rather than any other CAMs disclosure. Therefore, although my additional analyses fail to directly reinforce H1, they do demonstrate the ability of the CAMs extension to detect and reflect "hasty" management not through all CAM categories, perhaps, but via those which are more likely to be related to either real or financial earnings management.

Table 4: Regression on the CAMs_Suspect factor: Results					
Variable	(1)	(2)			
Intercept	-0.259***	-5.025***			
-	(0.054)	(0.398)			
Meet	0.004	0.028			
	(0.008)	(0.053)			
Size	-0.015***	-0.121***			
	(0.003)	(0.025)			
Loss	-0.024***	-0.164***			
	(0.009)	(0.060)			
NI	0.000001	0.00001			
	(0.000001)	(0.00001)			
Analysts	0.015***	0.116***			
	(0.005)	(0.034)			
Leverage	0.029**	0.189*			
	(0.015)	(0.099)			
ROA	-0.006	-0.018			
	(0.018)	(0.127)			
Busy	-0.012*	-0.084*			
	(0.007)	(0.048)			
Big4	0.038***	0.332***			
	(0.009)	(0.068)			
AF_LN	0.033***	0.260***			
	(0.005)	(0.036)			
Rects	-0.166***	-3.155***			
	(0.019)	(0.503)			
Horizon	0.001***	0.006***			
	(0.0002)	(0.002)			
BTM	-0.010	-0.069			
	(0.007)	(0.053)			
Number of obs.	16`659	16`659			
Null deviance	2`466.8	15`743			
Residual deviance	2`413.6	15`305			
AIC	15`124	15`333			

This table is part of the additional analysis I conduct in my thesis.

The table reports the logit regression results of the *Meet* independent variable and the relevant controls on the likelihood of a firm-year including a *CAMs_Suspect* observation. Column (1) reports on Logit results and column (2) on logit-binomial.

If in a given firm-year a CAM of one of the categories I suspect to be more representative of managerial opportunism is reported, the dependent variable is assigned the value of one. *Meet* equals one if in a given year a firm just beats analyst consensus forecasts from I/B/E/S summary files by 5 cents or less. *, **, *** indicate statistical difference from zero (two-tailed) at the <0.10, <0.05, and <0.01 levels, respectively. The obtained statistics are in the form of log-odds. Likelihood statistics of the coefficient of interest are reported in Table 6. Variable definitions are included in the Appendix.

Variatia	1. cgi costuli - C	ATVIS_SUSPECT IA	Table 5. Regression - CANIS_Suspect factor (reduced sample). Results					
variable	(1)	(2)	(3)	(4)				
Intercept	-0.139*	-0.134*	-3.587***	-3.574***				
	(0.079)	(0.079)	(-0.431)	(0.430)				
Meet	0.055***	0.055***	0.267***	0.265***				
	(0.012)	(0.012)	(0.058)	(0.058)				
Size	-0.052***	-0.053***	-0.290***	-0.293***				
	(0.005)	(0.005)	(0.028)	(0.027)				
Loss	-0.036***	-0.029***	-0.178***	-0.154***				
	(0.013)	0.011	(0.066)	(0.056)				
NI	0.000001*	0.000001**	0.00002**	0.00002**				
	(0.000001)	(0.000001)	(0.00001)	(0.00001)				
Analysts	0.045***	0.046***	0.247***	0.250***				
	(0.007)	(0.007)	(0.037)	(0.037)				
Leverage	0.041*	0.037*	0.214**	0.204*				
	(0.021)	(0.021)	(0.108)	(0.107)				
ROA	-0.034	-	-0.109	-				
	(0.030)	-	(0.148)	-				
Busy	-0.058***	-0.057***	-0.286***	-0.283***				
	(0.011)	(0.011)	(0.053)	(0.052)				
Big4	0.088***	0.087***	0.495***	0.493***				
	(0.014)	(0.014)	(0.075)	(0.075)				
AF_LN	0.045***	-	0.265***	0.264***				
	(0.007)	-	(0.039)	(0.039)				
Rects	0.198	0.045***	0.854	-				
	(0.157)	(0.007)	(0.710)	-				
Horizon	0.001**	0.001***	0.006***	0.006***				
	(0.0004)	(0.0004)	(0.002)	(0.002)				
BTM	0.049***	0.049***	0.260***	0.261***				
	(0.012)	(0.012)	(0.060)	(0.060)				
Number of obs.	10`679	10`679	10`679	10`679				
Null deviance	2`162	2`162	12`704	12`704				
Residual dev.	2`090.8	2`091.3	12`327	12`329				
AIC	12`921	12`920	12`355	12`353				

CAME Sugnest factor (reduced comple). Desults Table 5. D

The table reports the logit regression results of the Meet independent variable and the relevant controls on the likelihood of a firm-year including a CAMs_Suspect observation.

Unlike Tables 3 and 4, this table reports results on a reduced sample which only includes firm-year observations that have at least one CAM reported. Therefore, the coefficient of interest estimates the likelihood of a "suspected" CAM being disclosed given that the firm just beats forecasts and that the firm triggers CAMs in general. This particular analysis demonstrates how much more likely is a firm that just beats forecasts to trigger a suspected CAM rather than a non-suspected CAM.

The odds of both *CAMs* and *CAMs_Suspect* being assigned the value of one when a firm just beats forecasts are reported in Table 6 below.

Table 6: Log-odds Results of the Independent Variable Meet on Critical Audit Matters					
The	Regression	Log-odds	% increase in likelihood of CAMs/CAMs_Suspect		
Dependent	attempt				
Variable					
	Logit	0.905	-10%		
CAM-	Logit 1*	0.906	-9%		
CAMS	Logit-binomial	0.623	-38%		
	Logit-binomial 1*	0.623	-38%		
	Logit 2*	1.004	0.4%		
	Logit-binomial 2*	1.028	3%		
CAMs Suspect	Logit 3*	1.057	6%		
Suspeet	Logit-binomial 3*	1.306	31%		
	Logit 4*	1.056	6%		
	Logit-binomial 4*	1.303	30%		

This table reports the log-odds of the independent variable *Meet* on the *CAMs* and the *CAMs_Suspect* dependent variables respectively. Each estimate apart from the regression attempts labelled at "2" are statistically significant at 1% level.

1* - These regressions have fewer control variables employed than the original regression, with only control variables which proved to be statistically significant in the original regression remaining.

2* - These regressions, although positive, fail to produce statistically significant coefficients of interest.

3* - These attempts are regressed over a reduced sample that only has firm-year observations with at least one CAM reported.

4*- These attempts are regressed over a reduced sample that only has firm-year observations with at least one CAM reported and include only those control variables which are statistically significant according to the results of attempts at "3*".

[End of Table 6]

5. Conclusion

This study investigates the ability of the newly introduced CAMs extension to exhibit usefulness in detecting certain manifestations of managerial opportunism. In particular, the relationship between CAMs and firms just meeting and/or beating analysts` forecasts is examined. In opposition to my hypothesis, my original empirical results suggest that firms that just meet or beat forecasts are less likely to include CAMs disclosure within their audit reports. I offer three interpretations to these results: auditors generally prefer to use the extension as a channel for reporting unusual financial/real behavior of firms and therefore just meeting expectations lessens the likelihood of general CAMs disclosure taking occurrence; it is unlikely that all CAMs disclosed can be attributed to "hasty" management as not everything that falls within the scope of the extension must necessarily be a consequence of managerial actions; the sample is comparatively small to prior studies at the time of evaluation (only 4 years have passed since the mandatory introduction of CAMs).

Although my primary results reject my proposed hypothesis, additional analyses performed do not. One might even argue that the additional tests do to an extent reinforce the theoretical reasoning outlined in Sections 1-2. The relationship between meeting benchmarks and CAMs` occurrence changes from negative to positive once one considers only certain categories of CAMs to be of interest. Within my additional analyses, out of firms that display at least one CAMs disclosure of any type, those companies that just beat forecasts are more likely to display a "suspected" type of CAM rather than the "non-suspected" ones. These findings hint at the ability of the CAMs extension to provide useful information on the influence of managerial opportunism on firm behavior (as in- detect such management).

This study provides useful implications for potential users of the CAMs disclosure and especially for those who are concerned with managerial actions and their influence on firm behavior. My study reinforces the view of PCAOB can provide useful information to potential users, as I conclude – also on managerial behaviour.

My study is subject to several caveats. Firstly, as I have already mentioned previously, the sample at the time of examination only contains four years' worth of observations. Secondly, the *Suspected_CAMs* dependent variable employed in additional testing was formed under my own subjective judgment and therefore may very well be not the most objective variable to represent the construct of "hasty" management. Thirdly, my analyses fail to correct for the "complicated firm/industry" factor. One can reasonably assume that a business complex enough will naturally end up attracting more CAMs within its audit, however, this cannot at all be hastily attributed to managerial behavior. I urge future researchers to consider the notion of an "unexpected" CAM as for example (but not limited to) how this idea was employed by Burke et al. (2023). In simple terms, the researchers use market anticipation to predict "unexpected" CAMs and compare those predictions against realized disclosure observations. I expect the positive relationship between just meeting/beating forecasts and unexpected CAMs or even unexpected "Suspected" CAMs to be positive and even more pronounced than the relationship estimates I obtain in this paper.

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Appendix A: Variable Definitions

Variable:	Definition:
Variables Includ	ed in Auditor Choice Analyses
CAMs	An indicator variable set to one if the firm has a CAM disclosed in its auditor's report.
CAMs_Suspect*	An indicator variable set to one if the firm has CAMs of a category that is likely to be influenced by "hasty managers" disclosed in its auditor's report.
Meet	Equals one if the firm meets or beats the last forecast of the period by no > 5 cents ($0 \le EPSt - F(t-1) \le 0.05$)
Horizon	The number of calendar days between the last analyst forecasting date before the earnings announcement and the earnings announcement date.
Size	Natural log of total assets.
Loss	An indicator variable set to one if Compustat net income is less than zero.
Leverage	Total long-term debt divided by total assets.
ROA	Income before extraordinary items, scaled by total assets.
Analysts	Natural log of the number of analysts providing earnings forecasts.
Rects	Indicator variable equal to one if the connected firm does not misstate its financial statement in the past two years, and zero otherwise.
BTM	Book-to-market ratio, which equals the total common stockholders' equity divided by market capitalization.
BIG4	Indicator equals 1 if the company is audited by a big4 firms, else 0.
Busy	An indicator variable set to one if the firm has a fiscal year-end in December, zero otherwise.
NI	Income before extraordinary items
AF_LN	The natural log of fees charged by the auditor for auditing services.

Appendix	B:	Additional	Tables
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Table 1B: CAM Categories - Statistics					
CAM Type	N	% of observations Meet ∩ CAM			
Foreign currency translation	1	100%			
Long-term investments	9	33%			
Interest revenue	24	29%			
Regulatory assets and liabilities	183	25%			
Subsidiary/affiliate	9	22%			
Inventory	555	21%			
Property, plant and equipment	397	19%			
Asset retirement and environmental obligations	172	19%			
Goodwill	1561	19%			
Depreciation and amortization	93	18%			
Long-lived assets	477	18%			
Derivatives and hedging	78	4%			
Other expenses	26	4%			
Warranty liabilities	120	3%			
Related party transactions	65	2%			
Shareholder valuation	17	0%			
Selling, general and administrative expenses	12	0%			
Financial statements and disclosures	7	0%			
Fresh start accounting	3	0%			
Balance sheet classification of assets	3	0%			
Error corrections	1	0%			
Total sample:	16`659	14%			

This table reports brief summary statistics on different types of CAMs within my final sample. I select eleven categories that demonstrate a *Meet* intersection with *CAMs* the most and ten categories that have the least *Meet-CAMs* intersections respectively as % of all observations.

able 2D. CAMS_Suspect - variable formulation	
CAM Type	Reasoning for selection
Foreign currency translation	Uncommon operations (for most firms)
Balance sheet classification of assets	Relatively subjective reporting
Regulatory assets and liabilities	Relatively subjective reporting
Sales return and allowances	Potentially subject to real management
Vendor/supplier rebates	Potentially subject to real management
Asset retirement and environmental obligations	Relatively subjective reporting; can be used by managers
Other liabilities and provisions	Relatively subjective reporting; can be used by managers
Uncertain tax positions	Can be used to manage earnings as found by Beardsley et al. (2021)
Goodwill	Subjective reporting via impairment tests; can be used by managers
Depreciation and amortization	Subjective reporting via revaluation; can be used by managers
Inventory	Potentially subject to real management
Fresh start accounting	Relatively subjective reporting; can be used by managers
Internal controls	Affects managerial behaviour
Interest revenue	Often subject to earnings management as found by Chi, 2009
Property, plant and equipment	Subjective reporting via revaluation; can be used by managers
Real estate investments	Potentially subject to real management
Research and development expenses	Potentially subject to real management

Table 2B: CAMs_Suspect - Variable Formulation

This table provides general reasoning behind the formulation of the second dependent variable *CAMs_Suspect* which I employ for additional testing. *CAMs_Suspect* takes the value of one if a firm year observation includes a CAM disclosure of one of the categories above, else zero. I briefly justify why I expect these CAM types to be more reflective of managerial opportunism.