KAM Disclosure in the Auditor’s Report– A Literature Review

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KAM Disclosure in the Auditor's Report– A Literature Review[1]

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The requirement of including Key Audit Matters (KAM) is the most significant change made to the auditor's report in many years. The purpose of KAM is to meet the request from the users of accounting information to include more information in the auditor's report on matters that are most significant and critical to the audit and, by that, enhancing the transparency and communicative value of the auditor's report. Still, the KAM disclosure requirement may have both intended and unintended consequences for auditors, clients, users and regulators.

Subsequent to the introduction of KAM, a significant number of research papers has explored the impact of KAM or similar reporting initiatives (CAM/RMM/EQM/JOA).[2] Our literature review includes research published through May 2020. The review is structured into auditor consequences, user consequences, and client consequences. We carefully distinguish between various extended auditor reporting initiatives, such as KAM/CAM/RMM when discussing the research findings.

Based on the archival research, the impact of KAM disclosure appears to be non-existent or at best very small. The experimental research papers focusing on KAM/CAM provide some indications of a behavioral impact. Still, these findings should be interpreted with caution since most of the participants in these experiments are less sophisticated than in a "real life setting".

The research activity in this area is high, and future research could help to further indicate and eventually confirm the various potential implications of the new reporting regime. Based on the available evidence at this point, the overall impact of the KAM/CAM disclosure requirement appears to be limited and, to some extent, mixed.

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[1] This paper is a copy of the authors' last version of this paper that was sent to the publisher. The final article is included in the book Finansiell og ikke-finansiell rapportering: trender og utvikling: festskrift til Hans Robert Schwencke / [ed] Tonny Stenhiem, Kari Birkeland, Oslo: Gyldendal Akademisk, 2021, s. 357-400.

[2] Critical Audit Matters (CAM), Risk of Material Misstatements (RMM), Emphasis of Matters (EOM), and Justification of adjustment (JOA).

1 Introduction

The auditor communicates with users of financial statements in the auditor's report (Gray et al. 2011). The auditor's report is the only publicly available report including information about the observations and conclusions drawn from the audit. Following a period of significant criticism of the limited value and informativeness of auditor reporting (Carcello 2012; Turner et al. 2010), the IAASB introduced a new standard, ISA 701, with direct implications for auditor reporting. The new standard, which has been effective since 15th December 2016, requires auditors to disclose KAM in the auditor's report. For more details about its background and regulation, see the next section.

The main purpose and intended benefits of KAM and ISA 701, as communicated by the IAASB, are to improve audit quality by enhancing transparency and the communicative value of the auditor's report in response to investors' needs (IAASB 2013; Hosseinniakani 2020). The introduction of the KAM disclosure requirement may, however, lead to both intended (by the IAASB) and unintended consequences for the various stakeholders. The new disclosure requirement could impact the behaviors of auditors, clients (management), users and regulators. As a consequence of the KAM requirement, auditors may respond by further scrutinizing clients' accounting choices, and thereby mitigate the expected increase in auditor liability. Such behavioral change can be expected to improve audit quality and reduce earnings management (Reid, Carcello, and Li 2019; Li, Hay, and Lau 2018). One main concern with introducing KAM is that the disclosure requirement could lead to an increase in total audit hours and ultimately higher audit fees (Prasad and Chand 2017). Since the purpose is to enhance the informative value of the auditor's report, one would also expect an impact on investors' investment decisions (Mock et al. 2013; Carcello 2012). There are also several unintended consequences that may occur from such a major change in auditors' communication.

On 1st June 2017, the Public Company Accounting Oversight Board (PCAOB) issued a new auditing standard applicable for auditors of companies listed on the stock markets in the US (PCAOB 2017). This standard requires the auditor to report critical audit matters (CAMs), which is a requirement similar to KAM, but there are also some minor differences between CAM and KAM (e.g. Jermakowicz et al. 2018). According to AS 3101, CAMs are matters arising from the audit of the financial statements that have been communicated or were required to be communicated to the audit committee, that are related to accounts or disclosures that are material to the financial statements and involve especially challenging, subjective or complex auditor judgments. According to ISA 701, KAMs are defined as those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period. This means that a CAM needs to be linked to accounts and disclosures in the financial statements, but a KAM does not need to have such a link. For instance, a potential loss contingency that was communicated to the audit committee but assessed to be remote and not disclosed in the financial

statements or the determination that there is a significant deficiency in internal control will not be a CAM, but may well be a KAM (e.g. Jermakowicz et al. 2018 p. 36).

The purpose of this literature review is twofold. First, we present reported descriptive statistics on the reporting of key audit matters in Europe in general and Norway in particular. Second, we review the existing KAM literature. We include papers published until 31 May 2020, with the aim to provide an overview of the various documented effects of introducing the KAM regulation. Working papers are not included. Most of this research focuses on different consequences of KAM, and we classify and present the findings under the following three sub-headings: auditor consequences, client consequences and user consequences. Papers that research other topics related to KAM are consequently not included in the review. Three of these papers, however, investigate relevant descriptive findings from practice and are therefore included in our presentation of such evidence. Since documented findings in the CAM literature can be of relevance to understand the consequences of KAM, this literature is also included in the section on KAM consequences.[3] Even though the research on KAM/CAM is relatively new, the research in the area has expanded at high speed and has now reached a significant number of published papers. In total, our review of consequences of KAM includes 20 papers.

We have identified two[4] prior literature reviews of the existing literature on KAM/CAM with several similarities to our work (Gold and Heilmann 2019; Velte and Issa 2019). There are a few distinct differences between this chapter and these prior literature reviews, and the main differences are as follows:

- First, our literature review is written with the interests of practitioners in mind. We have therefore included a section with descriptive findings on KAM reporting, both from international research literature and from international professional reports. As the core readers of this chapter will be Norwegian academics and practitioners, we have also included some descriptive findings on KAM reporting from some Norwegian master's theses.

[3] During our different literature searches, we identified four papers that study the disclosure of topics related to KAM/CAM, i.e. "risk of material misstatements" (RMM), "material measurement uncertainty", "emphasis of matter paragraph" (EOM) and "justification of adjustment" (JOA). We have included two of these papers: Reid et al. (2019) which studies RMM and Dennis, Griffin, and Zehms (2019) which studies "material measurement uncertainty" as these papers are particularly relevant for a broader understanding of KAM consequences.

[4] We are also aware of a third review article in the KAM area (Masdor and Shamsuddin 2018). This paper focuses on the effect of KAM implementation on investors and will not be discussed any further as the scope and content of the paper is not directly relevant for our review.

- Second, we include more recent research papers, as well as other research papers, than those included in these two previous literature reviews.[5]
- Third, we carefully distinguish different forms of extended auditor reporting, such as KAM, CAM, RMM etc. from one another.
- Fourth, we use a different categorization of the research papers, structuring the review into auditor consequences, user consequences and client consequences.[6]

In the remaining part of this chapter, we first describe the background and regulation of KAM/CAM. Next, we present descriptive findings on KAM reporting over the first years subsequent to the implementation of KAM. Then, we review published research papers on consequences of introducing KAM/CAM reporting. Finally, we discuss the overall impact of introducing KAM, practical implications and suggest venues for future research.

2 Background, regulations and literature searches

2.1 Background and regulation

The auditor's report is the most important means of communication between the auditor and the users of accounting information. Still, it provides very standardized information and almost all companies receive the same unqualified auditor's report. A general perception is that the high level of standardization of the auditor's report has compromised its usefulness, informativeness and ability to provide transparency of the audit process (Asare and Wright 2012; Church, Davis, and McCracken 2008; IAASB 2011). The request from users of accounting information, and in particular investors, to increase its informative value was augmented after the financial crisis in 2007–2008 (EC 2011). The reasons for the increased criticism were that the auditor did not warn, in the auditor's report, about future financial uncertainties in the large financial firms and institutions that later declared bankruptcy or entered into severe financial difficulties

[5] Both Gold and Heilmann (2019) and Velte and Issa (2019) include working papers. Gold and Heilmann (2019) include literature written before 01/08/2018. Velte and Issa (2019) include literature written before the end of December 2018. Four of the papers we include (Ozlanski 2019; Sierra-Garcia et al. 2019; Moroney, Phang, and Xiao 2020; Hosseinniakani 2020) are published after these dates and not included as workings papers in the two earlier literature reviews. We have also included one study (Sneller, Bode, and Klerkx 2017) that is published before these dates, but that is not included in the two previous reviews.

[6] Gold and Heilmann (2019) structure the review into the following main categories of papers/articles: Investor behavior and market reaction, auditor responses, auditor liability and client management responses, whereas Vetle and Issa (2019) use the following categorization: (1) shareholders (e.g. investors' perceptions of auditors' responsibility and litigation, value relevance and investors' decisions); (2) debtholders (e.g. loan contracting terms); (3) external auditors (e.g. audit processes and audit fees); (4) boards of directors (e.g. earnings management); and (5) other stakeholders (e.g. informational value for suppliers and customers).

during the financial crisis, involving restructuring and default of payment (e.g. Geiger, Raghunandan, and Riccardi 2014).

Findings from extant research have also drawn up the same picture, that the auditor's report is little informative. For instance, Carcello (2012) and Turner et al. (2010) report that users of accounting information in general value the auditor's opinion, but that they showed little interest in reading other parts of the auditor's report due to the high level of standardization. Others find that users perceive the auditor's reports as uninformative (Church et al. 2008, Gray et al. 2011), and that they would like more information about the audit process and the audit findings (Mock et al. 2013), information about key audit risk areas among these (Vanstraelen et al. 2012). This suggests an information gap between the users' desires of the auditor's report and the information actually offered in the auditor's report (IAASB 2012).

After the financial crisis (in 2007–2008), regulators and academics started discussing how to address concerns that the auditor's report was perceived as standardized and too little informative for their decision making. In 2010, the European Commission published a Green Paper which, among other topics, included suggestions concerning the auditor's report. Stakeholders, including investors, lenders, analysts, academics, management personnel, auditors and regulators, were invited to comment on the suggestions made in the Green Paper (EC 2010). In the aftermath of the Green Paper, the IAASB invited investors, financial analysts and other users to indicate their preferences concerning the content of the auditor's report (IAASB 2012). Basically, there was a demand for more information about the considerations and actions taken in the audit process and about the clients' accounts. Additional information about significant audit matters, auditor's conclusions on the appropriateness of management's use of the going-concern assumption and other entity-specific information were high on the list of desired information.

The EU continued the process of developing a new regulation that could reduce the existing information gap between users and auditors by proposing a new regulation of audits of public interest firms (EC 2011). The proposed regulation included a requirement to report risks of material misstatements in the auditor's report. A new EU regulation, which requires the reporting of such risks, was stipulated in EU directive 2014/56/EU and EU regulation 537/2016. EU member states were obliged to implement this new regulation by 17th June 2016.

Almost simultaneously with the EU initiative, IAASB developed an exposure draft of a new ISA (IAASB 2013), which included a requirement for the auditor to report the audit's scope, key audit matters and materiality thresholds in the auditor's report (Ibid.). Investors and analysts responded in favor of the proposed extension of the auditor's report and the IAASB's new proposal. From their perspective, disclosing key audit matters was most important and a significant step towards increasing the informativeness of the auditor's report. In the new standard, ISA 701, that was made effective of audits of financial statements for listed firms for periods ending on or after 15th December 2016 (IAASB 2015), only the requirement to disclose key audit matters was included. Most of the research papers included in this literature review investigate KAM reporting under ISA 701.

According to ISA 701.8, key audit matters are "those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period". The key audit matters are selected from the matters communicated with those charged with governance and that have required significant auditor attention in the audit process. These key audit matters are generally areas where the auditor needs to make significant judgments, areas of higher assessed risk of material misstatements and/or significant events or transactions that had material effects on the audit (ISA 701.9). The description of a key audit matter shall include an explanation of (1) why the matter is considered as highly significant for the audit, (2) how the matter was addressed in the audit, and (3) a reference to the related disclosure in the financial statements (ISA 701.13).

The concept of assessed risk of material misstatements in the EUs legislation is to a large extent the same as the concept of key audit matters (FEE 2015), but there is one major difference concerning the scope of the disclosure requirements. The EU legislation requires the disclosure of matters included in the financial statements, while auditor's reports based on ISA 701 may also disclose matters not included in financial statements, but that are nevertheless deemed significant (Ibid.).

France and the UK were among the first nation-states to require more information in the auditor's reports. France required auditors to disclose justifications of assessments (JOAs) as far back as 2003. These justifications were matters that were important for the understanding of the financial statements, such as the implementation of accounting policies, significant accounting estimates and elements of internal control. Their objective was to "enable the user of the report to obtain a better understanding of the reasons behind the statutory auditors' opinion on the financial statements" (cited in Bédard et al. 2018, 1). Later on, France has amended its extended audit disclosure in line with the EU and ISA requirements. The UK has required auditors to disclose matters of risk of material misstatements as far back as 2013. The requirements demanded auditors to include a discussion of material misstatement risks, materiality thresholds and the scope of the audit in line with the proposed EU regulation back in 2011. Similar to France, the UK has later amended the requirements in line with the EU and ISA requirements.

The PCAOB issued a new auditing standard on 1st June 2017 (PCAOB 2017), which requires the auditor to discuss critical audit matters (CAMs), auditor tenure and audit firm independence in the auditor's report of US firms. CAMs are basically defined in the same manner as KAM although there are some minor differences (e.g. Jermakowicz et al. 2018). CAMs are matters arising from the audit of the financial statements that have been communicated or have been required to be communicated to the audit committee, that are related to accounts or disclosures that are material to the financial statements and involve especially challenging, subjective, or complex auditor judgment, cf. AS3101. This means that a CAM need to be related to accounts and disclosures in the financial statements, but a KAM does not need to have such a link. For instance, a potentially illegal act that was communicated to the audit committee but assessed to be remote and not disclosed in the financial statements or the detection of a significant deficiency in internal control will not be a CAM, but may well be a KAM (Jermakowicz et al. 2018, 36).

The PCAOB's new regulation requires CAMs to be included for audits of large accelerated filers with fiscal years ending on or after 30th June 2019, and for audits of all other firms with fiscal years ending on or after 15th December 2020. Thus, the requirement to disclose CAM has just recently been implemented, whereas KAM has been effective for some years. This explains why there are very few archival studies yet that investigate CAM reporting practices.

2.2 Literature search methodology

To provide as complete a picture as possible of the published literature, our literature search methodology can be described as follows: First, we searched for published research papers using the following combinations of words: "key audit matters" and "critical audit matters" in the Business Source Elite, SpringerLink, Taylor & Francis, ScienceDirect and Wiley databases restricted to peer-reviewed papers in English. These literature searches led to the identification of 154 papers, some of which are found in several of the databases (non-unique), and many are of no relevance for the topic in this chapter. To ensure the quality of the included research, we then restricted our inclusion of papers to those that are published in journals listed on the ABS list on level two or higher in the accounting section. Identified papers that are not relevant, when the aim is to provide an overview of the various documented effects of introducing the KAM regulation, are also excluded. With "relevant" we mean that the paper includes interesting descriptive/explanatory findings of KAM or that the study includes findings that make a contribution to understanding the consequences of KAM.[7]

This procedure left us with a total of 23 unique papers, see Table 1 below, consisting of three papers (Sneller et al. 2017; Pinto and Morais 2018; Sierra-Garcia et al. 2019) that are included in our section 3 on KAM descriptives and 20 papers that are included in the literature review on KAM consequences, see section 4, Tables 4, 5 and 6.

Table 1. Overview of search methodology and findings

Search term	Restricted to peer-reviewed and in English*	Relevant topic in high quality	Relevant, but included in paper on	Sum

[7] During our literature searches described above, as well as other more general literature searches, we identified many papers that did not meet our criteria of being published in a journal at ABS level 2 or higher. In order to also provide a broad and informative review, we have decided to make a few subjective exceptions from the ABS publication criteria. These papers have been selected based on our own assessment of their relevance to complement our review. The following publications have been included on these subjective bases: Li et al. (2019) in the Pacific Accounting Review (ABS level 1), Ratzinger-Sakel and Theis (2019) in Corporate Ownership & Control (ABS level 1) and Hosseinniakani (2020) which is a dissertation manuscript presented at Gothenburg University in May 2020. During our more general literature searches, we also came across two high-quality papers (Dennis et al. 2019; Bentley, Lambert, and Wang 2020) that we also have found highly relevant and consequently included.

		journal described in this chapter**	subjective grounds	
Key audit matters	84	10	1	11
Critical audit matters	70	8		8
Found in other searches		2	2	4
Total	154	20	3	23

*) Non-unique hits
**) Unique hits

3 Key audit matters – evidence from reporting practice

Auditors of listed firms that comply with the ISA regulation have been required to report key audit matters (KAM) in the auditor's report since 2016 (first full year 2017). There are several descriptive studies providing statistics on the reporting of type and number of KAMs across countries, across audit firms and across industries. For instance, all the Big 5 audit firms have conducted descriptive studies on KAM reporting (BDO 2017; Deloitte 2018; EY 2018; KPMG 2020; PwC 2018). Several of these studies are single-country studies (conducted, for instance, on firms from Singapore and New Zealand) and are therefore not suited to provide an overall picture of the KAM reporting practices. The EY study (EY 2018) serves as an exception, along with the study conducted by Audit Analytics (2019) and the Association of Chartered Certified Accountants (ACCA 2018). As the Audit Analytics study is the one bringing the latest updates and the one with the most comprehensive data, this study will be paid most attention to in the presentation below.

Audit Analytics (2019) has investigated KAM disclosures of more than 1100 European firms in the fiscal year 2017. A total of 3 300 KAM disclosures were examined. The average number of KAMs is found to be around three. The distribution of KAMs is slightly different among the six largest audit firms, ranging from 2.6 (Grant Thornton) to 3.1 (both EY and PwC) on average (see Audit Analytics 2019, 23). In the middle, we have, ranging from the top, Deloitte with 3.0, then BDO with 2.9 and, finally, KPMG with 2.6. In a study conducted by Sierra-Garcia et al. (2019) on FTSE 100 firms (UK), the number of KAMs reported are much higher, ranging from 3.9 for KPMG to 5.2 for PwC, with BDO 4.3, EY 4.3 and Deloitte 4.4 in the middle (see p. 236).

The number of KAMs may also vary with industry. Sierra-Garcia et al. (2019, 236) show that firms in some industries are more subject to KAM disclosures than others. Utilities and gas and oil are the industries with the highest average of KAMs (5.6), whereas the consumer services is the industry with the lowest average of KAMs (3.9).

The most common KAMs among the 3 300 KAMs investigated by Audit Analytics (2019) was concerning asset impairments, comprising 20 % of all the reported KAMs. Revenues and valuation of investments followed at 16 % and 11 %, respectively. Similar findings are also reported in the EY study (2018, 63) where 1 463 KAMs from 42 countries were investigated. As in the Audit Analytics study, the most frequent KAMs concern asset impairments, whereas valuation of investments and revenues are the next two in line, respectively.[8] Table 2 below shows the distribution of different types of KAMs in the Audit Analytics study (2019).

Table 2. Most frequent KAMs

Classification of KAM	Number of KAMs	Percent*
Asset impairment	655	20 %
Revenues and other income	533	16 %
Valuation of investments (including fair value)	363	11 %
Income taxes	293	9 %
Business combinations	162	5 %
Inventory	152	5 %
Contingent liabilities	142	4 %
Pension and other post-retirement benefits	110	3 %
Accounts receivable	97	3 %
Liabilities and provisions	85	3 %

Source: Audit Analytics (2019, 24). *2017 Audit Opinions only.

Approximately 15 % of all KAMs concern impairment of goodwill and impairment of other intangible assets (KAMs on impairments in general constitute approximately 20 % of all KAMs). A closer specification of the asset impairment category is provided in Table 3 below:

Table 3. KAMs on asset impairment

Asset impairment – more details	Number of KAMs
Impairment in goodwill	250
Impairment in goodwill and intangible assets	167
Impairment in property, plant and equipment	101
Impairment in other intangible assets	83
Impairment in investments	40
Impairment in land and stores under construction	14

Source: Audit Analytics (2019, 24).

Some research papers have investigated possible determinants of KAM reporting. As seen from the descriptive statistics above, the KAM disclosures vary among countries, industries and audit firms.

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[8] KAMs may well also be related to high risk areas that are not directly related to financial statement disclosures. For instance, Sneller et al. (2017) document that IT-related key audit matters are quite frequent and contain important information, based on a sample of companies listed on the main Dutch stock market (AEX).

Pinto and Morais (2019) investigate several determinants of KAM disclosure for a sample of listed firms in the UK (FTSE 100), France (CAC 40) and the Netherlands (AEX 25) that disclosed KAMs at the 2016 fiscal year-end. They find that the number of KAMs is positively associated with firm-level characteristics such as the size of the firm (measured by total assets), the number of segments and the audit fees. They also report evidence suggesting that firms that are more profitable generally are subject to less KAM disclosures. The same is the case if the firms belong to the financial industry. There are also some evidence suggesting that auditors are more inclined to report KAMs when these are associated with regulations in a precise (rule-based) accounting standard than when not.

Sierra-Garcia et al. (2019) investigate the association between firm and auditor characteristics on the number and type of KAM/RMMs disclosed in auditor's reports for FTSE 100 firms during the period from 2013 to 2016. They find evidence suggesting that Deloitte, EY and KPMG tend to report fewer entity-level-risk KAM than PwC, while KPMG and BDO report fewer account-level-risk KAM than PwC. They also find that auditors of firms paying more audit fees disclose more entity-level-risk KAM and fewer asset-level-risk KAM. In all, these findings suggest that both firm and auditor characteristics are important determinants of the number and type of KAMs reported in the auditor's report.

Several studies have also been conducted on Norwegian data. Most of these studies are carried out as part of master theses work. Andersen and Hansen (2018) investigated the KAM reporting for listed firms on the Oslo Stock Exchange for the fiscal years 2016 and 2017, and find that the average number of KAMs was approximately two KAMs for each firm. They also find evidence suggesting that the number of KAMs was positively associated with the size of the audit client, which is a general result found in other studies (e.g Pinto and Morais 2019; Sierra-Garcia et al. 2019). They also find some evidende suggesting that the incidence of reporting a KAM on revenues is positively associated with capital turnover. Moreover, they also find som evidence suggesting a positive association between the incidence of an impairment loss previous year and reporting a KAM on impairment the next year. This association was particularly strong for companies in the oil and gas industry (probably due to the oil price decline in 2014 and 2015).

Thoresen and Enderud (2018) also investigate the reporting of KAM for listed firms on the Oslo Stock Exchange. They conducted a descriptive study on the number and type of KAMs reported in the audit reports of these listed firms. They also made use of a content analysis of a smaller sample of audit reports. Their evidence suggests that there are only small variations in KAM reporting from the fiscal year 2016 to the fiscal year 2017. This is the case for number and type of KAM but also the exact textual content of the KAMs as reported in the audit reports. In line with previous findings, they also find evidence suggesting that the number of KAMs is postively associated with the size of the audit client. They also find some systematic differences in KAM reporting between the Big 5 audit firms when it comes to the number of KAMs, the length of the audit report and the extent of firm-specific information found in the audit report.

4 Literature review on consequences of KAM

In the literature review, we first briefly explain how each of the included studies was conducted, before we report their main findings. For each main area (i.e. auditor, client and user), we also present a table that provides an overview of the research and conclude on the overall results from the research in the area, see Table 4, 5 and 6. As we classify the literature into three KAM topics, the same paper may appear more than once in our review.

There are several empirical measures typically used by researchers that capture both auditor and client behaviors. For example, changes in audit fees and earnings management (e.g. accrual quality) indicators may imply auditor and/or client behavior responses to the KAM requirement, since both parties negotiate the fee and are involved in the production of the audited financial statement. In this review, we have decided to report results for audit fees under auditor consequences and earnings management/earnings quality/audit quality measures under client consequences. We acknowledge that this decision is arbitrary.

4.1 Auditor consequences

A priori, it is unclear how and to what extent the KAM requirement will actually impact auditors and their work. One could think of two fundamentally different approaches here. The first view holds that there are few and only very minor auditor adjustments, i.e. the audit work is more or less unchanged and the only difference from before is that auditors disclose the identified key audit matters into the auditor's report. Key audit matters were identified also before the KAM requirement, however, but not disclosed in the auditor's report. Therefore, it is not evident that the audited financial statements will be affected by KAM. Some of the practitioners have also pointed out that KAM reporting implies nothing more than that *"auditors are simply required to report what they have always done*" (BDO 2013; KPMG 2013).

The second view holds that KAM represents one of the most significant changes to auditing and auditor reporting in recent times. Proponents of this view predicts that KAM will have a fundamental impact on many different aspects of auditing, such as auditor liability, audit process (e.g. increased scrutiny of reported KAM areas), audit effort (more extensive audit procedures and more audit hours), more skeptical judgment and skeptical action and more conservative auditor reporting. For example: "*By actually disclosing more information in their reports, auditors may feel more accountable for their work and therefore perform additional procedures to improve the quality of the financial reports*" (IAASB 2013; Peecher et al. 2013, cited in Reid et al. 2019).

Below, we present the research findings related to auditor consequences of the introduction of KAM under three sections (i.e. auditor liability, auditor behavior and audit fees). Based on the review of the existing literature, we hope to be able to conclude, at least to some extent, on the extent and type of auditor consequences of KAM and whether the first or second view discussed in the above appear to be most valid.

4.2 Auditor liability

One assumption is that KAM disclosures increase the liability of the auditor (Reid et al. 2019). The relevance of this assumption has been investigated in experimental research that tests whether KAM disclosure affects juror's assessment of auditor liability (Vinson, Robertson, and Cockrell 2019; Brasel et al. 2016a; Gimbar, Hansen, and Ozlanski 2016; Kachelmeier et al. 2019). Auditors may subsequently remove a KAN/CAM or continue to report the same CAM for several years. Vinson et al. (2019) investigate the effects of CAM removal and duration on jurors' assessments of auditor negligence when there is a subsequent material misstatement due to fraud in the account related to the CAM. They conduct two experiments to investigate CAM removal and duration related to two misstated accounts: one of relatively high complexity (land restoration liability), and one of relatively low complexity (inventory). Overall, for the more complex account, they find that CAM removal and duration do not influence negligence assessments in isolation. Rather, removing CAMs of long duration increases jurors' negligence assessments. For the less complex account, authors find limited support for the effect of CAM removal on auditor liability, and no support for CAM duration.

Brasel et al. (2016a)[9] recruited 528 participants from Amazon's Mechanical Turk, an online marketplace where ''workers'' complete online tasks for compensation, to their experimental study. They find that CAM disclosures, under certain conditions, can actually reduce auditor liability judgments as jurors perceive that undetected fraudulent misstatements were more foreseeable for the user suing the auditor. The effect of CAMs on jurors' auditor liability judgments varies by misstatement type. CAM disclosure appears to be particularly important for misstatements that are relatively less foreseeable. Finally, Brasel et al. (Ibid.) find that disclosure of any CAM (i.e. related or unrelated) provides litigation protection relative to stating there were no CAMs. Thus, auditors might have legal incentives to expand CAM disclosures in unwarranted areas, thereby undermining the intent of the proposed standard by diluting the impact of more appropriate CAM disclosures.

Pairing the findings of Vinson et al. (2019) with those in Brasel et al. (2016a) suggests that an auditor would receive a reduction in guilty verdicts in the first year they report a CAM for a less complex account, and then could remove or continue to report the CAM for multiple years without an increase in guilty verdicts. Contrarily, reporting a CAM for a more complex account would not increase guilty verdicts for the first year, but subsequently removing the CAM after multiple years will expose the firm to increased guilty verdicts. Based on this, firms could be less incentivized to report CAMs for more complex accounts or to remove such CAMs even if it might be appropriate to do so, both of which are inconsistent with the aim of the new standard.

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[9] One could note that Brasel et al. (2016a) also summarize their main findings from the study in the Accounting Review in a *practitioner summary* in Current Issues in Auditing (Brasel et al. 2016b).

Gimbar et al. (2016) investigate the impact of CAM paragraphs and precision of accounting standards on auditor liability. They perform an experiment on 234 students and manipulate disclosures on three levels; no CAM, related CAM and unrelated CAM. Similar to imprecise standards, which elevate the importance of auditor judgment and skill, authors argue that when the accounting treatment meets the letter of the law under a precise standard, related CAMs elevate jurors' perceptions that auditors had both a causal role in and an ability to foresee an alleged audit failure. Under precise standards, unrelated CAMs lead jurors to question the quality of the audit and the auditor's intent to take the necessary actions to prevent an accounting misstatement. The reported results in Gimbar et al. (2016) support these claims. Mediation analyses provide further evidence that increased perceived control in the case of a related CAM, and lower perceptions of audit quality in the case of an unrelated CAM, underlie participants' liability judgments.

Kachelmeier et al. (2019) include two different types of experimental studies in their paper (the first study is reviewed under "User Consequences"). The second study is a replication and extension of Gimbar et al. (2016), and the findings are of relevance for auditor consequences of introducing CAM reporting. Kachelmeier et al. (2019) perform an experiment on 165 undergraduate students, and results from the replication are fully consistent with those reported in Gimbar et al. (2016). For the extension, they find *lower* perceptions of auditor fault when the CAM disclosure and misstatement involve a measurement uncertainty issue (i.e. lease liability valuation). The results suggest that the perception of auditor liability (i.e. fault) is also dependent on whether the CAM (and misstatement) involves a categorical determination.

4.3 Auditor Behavior

The introduction of KAM requires that additional information, in the form of disclosure of key risk areas, is presented in the auditor's report. In research on the consequences of KAM for auditors, authors have not paid much attention to the content of KAM disclosures or to the determinants of KAM, but rather focused on whether the KAM requirement impacts auditor judgement, audit fees, the conclusion in the auditor's report (qualified/unqualified) and audit delays. The introduction of KAM is anticipated to make the auditor more accountable and legally liable for the disclosure of the additional information (Li et al. 2019). As a result, the litigation and reputational risk of auditors increase, and researchers have therefore suggested that KAM disclosures will impact auditor behavior so that costly audit failures can be avoided. Behavioral changes may involve effects on auditor independence, auditor performance and ultimately audit quality (Li et al. 2018; Reid et al. 2019).[10]

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[10] The reader should note that all reported results using earnings management indicators (e.g. abnormal accruals, small profits) are reviewed under "Client Consequences". These measures are affected by both client and auditor, but it is not possible to distinguish between the two. Since firm management is ultimately responsible for the content of the financial statement, we decided to report these study findings under "Client

Based on an experimental study on 169 German auditors, Asbahr and Ruhnke (2019) report that auditors' professional judgment regarding the reasonableness of a biased accounting estimate is not affected by the KAM requirement. However, the likelihood and amount of proposed adjustments are significantly lower when the accounting estimate will be reported as a KAM. Based on these results, they conclude that instead of enhancing professional skepticism, their evidence indicates that the format of reporting KAM can serve as moral license to waive an adjustment. Indications of negative KAM implications for professional skepticism are also concluded in a study by Ratzinger-Sakel and Theis (2019).

Ratzinger-Sakel and Theis (Ibid.) investigate whether KAM disclosures affect auditor judgment performance. The study uses a 2x2 between-subjects experiment design, based on a goodwill impairment testing case, involving 73 German auditors. KAM consideration (present vs. absent) and client pressure (high vs. low) were manipulated as independent variables and their impact on the dependent variables, skeptical judgment and skeptical action, was investigated. Authors find that KAM is associated with less skeptical judgement, but not associated with skeptical action. They conclude that it seems as if auditors who consider KAM feel morally licensed to acquiesce to clients' desired accounting treatments and that KAM consequently has negative side effects.

Prior research has linked accountability and litigation risk to the audit opinion and to more conservative auditor reporting (Carcello and Li 2013). Based on the expectation that KAM disclosures will increase the accountability of the auditor, the introduction of KAM may lead to a higher propensity to issue a qualified auditor's report in the post-KAM period. In his dissertation, Hosseinniakani (2020) investigates this issue by analyzing auditor reporting in 776 European companies with KAM disclosures, and in a control sample of 779 companies with no KAM requirements. The study includes companies from 28 different European countries, most of the observations (340) being from the UK. Hosseinniakani (Ibid.) identifies no differences between the two groups in terms of the propensity to issue a qualified audit opinion, thus the inclusion of KAM to the auditor's report does not seem to impact the audit opinion issued.

The reporting of KAM may require an increase in audit effort. The additional effort would require more audit hours on the audit engagement and could also increase the time to complete the auditor's report. Audit hours are not publicly available, but the date for the issuing of the auditor's report is revealed in the auditor's report. Reid et al. (2019) use a sample from the UK, but fail to find any support of a KAM effect on the time between fiscal year end and the issuing of the auditor's report. There is no evidence that the KAM reporting requirement leads to longer time to disclose audit findings in the auditor's report.

Consequences". The reader may want to also consider earnings management findings when assessing the impact on audit quality.

4.4 Audit fees

The introduction of KAM may lead to an increase in the audit cost/fee. An increase could be the result of additional audit effort (i.e. more audit hours performed) as discussed in the above, or a higher risk premium, or a combination of both. It is likely that an auditor will respond to the increased accountability by performing additional audit procedures in the disclosed KAM areas (Reid et al. 2019). There are also other effects on audit related work on the engagements, including extended discussions with management and audit committees and performing additional quality control processes (Ibid.). Another cost is the additional training of audit partners required. In addition, auditors may try to increase the risk premium and charge higher fees to cover their legal liability cost in case of costly litigation and damaged reputation (Hosseinniakani 2020).

Reid et al. (2019) study consequences of KAM using a sample of companies listed on the London Stock Exchange (premium listing of equity shares), and two control groups of companies with no KAM disclosures (European and US). They report no effect of KAM disclosures on audit fees in the first two years after its implementation, but they report an improvement in audit quality. It is possible that the auditor bore some of the initial costs of KAM disclosures without passing the cost on to the client. Gutierrez et al. (2018) examine various consequences of KAM disclosures, including audit fee. They study LSE premium companies in the UK, which were mandated to adopt the expanded report, and a control group consisting of LSE AIM companies, which were not mandated to adopt it. Their analyses, based on a difference-in-difference design, include two years before and after the adoption of the new rule. In line with Reid et al. (2019), Gutierrez et al. (2018) report no overall audit fee effect, but instead document that companies with relatively lengthy reports and large numbers of risks disclosed in KAM pay comparatively higher fees.

There are, however, other studies that in fact document an increase in audit fees in post-KAM periods (Li et al. 2019; Hosseinniakani 2020). Li et al. (2019) use data from New Zealand, and find that enhanced auditor's reports are associated with an increase in audit fees. Using a sample of companies from 28 European countries, Hosseinniakani (2020) also documents that KAM disclosures are associated with higher audit fees.

4.5 Conclusion on auditor consequences

The empirical evidence provides overall very limited support to most of the intended auditor consequences of the introduction of KAM. The studies reviewed are summarized in Table 4 below and include studies using archival and experimental research methods. There is, however, a lack of survey and interview-based studies on the topic. One basic assumption of the KAM introduction has been that the auditor liability increases, and this would in turn increase audit effort and/or risk premium, and ultimately audit quality. Based on several experimental studies published in high ranked journals, the assumption about higher liability does not seem to be valid. Under certain circumstances, auditor liability could even

be reduced. Furthermore, instead of increased skeptical judgment and skeptical action, the early experimental evidence suggests that KAM disclosure may, under certain circumstances, rather reduce skeptical judgment and skeptical action.

The only study that investigates the impact of KAM on auditor reporting, in terms of the audit opinion and days from fiscal year end to issuing of the report, documents no evidence of a KAM effect. The evidence on audit fees is more mixed. The evidence from the UK suggests that there is no fee effect, while evidence from a large sample of European countries indicates that audit fees are indeed higher in the post-KAM periods. Further evidence is needed to conclude on the KAM impact on auditor consequences, but the initial evidence reviewed gives no support to indicate behavioral changes that would improve the quality of auditor conduct and auditor reporting. Thus, the impact seems closer to the first view discussed in the introduction to this subchapter, i.e. auditors are doing largely the same work and the auditor behavioral impact appears limited.

Table 4. Auditor consequences

AUDITOR LIABILITY			
Author/s	**Data**	**Dependent & Independent variable**	**Findings**
Vinson et al. (2019) Auditing: A Journal of Practice and Theory (AJPT)	Experimental 2x2 experiment; Kadous' juror case (2000, 2001) 163 jury-eligible participants from the U.S, recruited at Amazon's Mechanical Turk	Negligence (0–10 scale) Verdict (0/1)-participant's belief about whether the auditor is guilty (dep. var.) CAM status (reported or removed) CAM duration (one year or multiple years) (indep. var.)	For the more complex account, CAM removal and duration do not influence negligence assessments in isolation. Rather, removing CAMs of long duration increases jurors' negligence assessments. For the less complex account, limited support for the effect of CAM removal on auditor liability, and no support for CAM duration.
Brasel et al. (2016a) The Accounting Review (TAR)	Experimental 4x2 between-participant experimental design Kadous' (2000, 2001) Big Time Gravel case, the auditors of a gravel company are sued by a lender due to overstatement of inventory 528 participants from Amazon's Mechanical Turk, U.S.	Negligence based on court transcripts and jury instructions, 0–100 scale (dep. var.) CAM (4 manipulations); no CAM disclosure requirement, CAM related to undetected misstatements; CAM unrelated to undetected misstatement; no CAM identified) (indep. var.) Misstatements; i) overstatement of inventory, ii) understatement of environmental restoration liability	Reduced auditor liability (under certain circumstances). Disclosing CAMs can, under certain conditions, reduce, rather than elevate, jurors' auditor liability judgments by increasing juror perceptions of the foreseeability of misstatements to plaintiffs. Liability judgments vary by misstatement type. Disclosure of any CAM (i.e. related or unrelated) provides litigation protection relative to stating there were no CAMs.

Gimbar et al. (2016) The Accounting Review (TAR)	Experimental Case: Bankruptcy and audit failure of an internet hosting company 234 students enrolled in an introductory accounting course at a large public U.S. university	Verdict: in favor or against the audit firm (dep. var.) CAM (3 levels): No CAM; related CAM; unrelated CAM Imprecise accounting standards (indep. var.)	Under a precise standard, related CAMs elevate jurors' perceptions that auditors had both a causal role in and an ability to foresee an alleged audit failure. Under precise standards, unrelated CAMs lead jurors to question the quality of the audit and the auditor's intent to take the necessary actions to prevent an accounting misstatement.
Kachelmeier et al. (2019) Contemporary Accounting Review (CAR)	Experimental Case: Study 2 of their paper is a replication and extension of Gimbar et al. (2016) – the extension involves information that the obligation is a capital lease 165 undergraduate students at a public university (recruited from introductory accounting classes)	Fault is the primary dep. variable of interest: average responses to three questions about the extent to which the auditor should be blamed for the plaintiff's losses (comparable to Gimbar et al. 2016) Independent variables: Same as Gimbar et al. (2016)	Replication results are consistent with Gimbar et al. (2016). Significantly lower perceptions of auditor fault when the CAM disclosure and misstatement involve a measurement uncertainty issue (i.e. lease liability valuation).
AUDITOR BEHAVIOUR			
Professional skepticism			
Asbahr and Ruhnke (2019) International Journal of Auditing (IJA) (ABS 2)	Experimental 2×2 between-subject factorial design; an accounting estimate task 122 German Big four auditors	Skeptical judgment, i.e. reasonableness of the accounting estimate (scale 1–10) (dep. var.) Skeptical action, i.e. probability of insisting on an adjustment and amount of adjustments (scale 1–10) (dep. var.) KAM reporting requirement (indep. var.)	No significant influence of the KAM reporting requirement on auditors' skeptical judgment. Skeptical action (both measures) is significantly lower under a KAM reporting requirement.
Ratzinger-Sakel and Theis (2019) Corporate Ownership and Control (ABS 1)	Experimental 2x2 between-subject design; goodwill impairment test 73 German auditors	Skeptical judgement and skeptical action (dep. var.) KAM consideration (absent or present) and client pressure (indep. var.)	Less skeptical judgement when KAM consideration is present. No difference in skeptical action between groups with absent and present KAM consideration, respectively.
Auditor reporting (i.e. audit opinion)			
Hosseinniakani (2020) Dissertation	Archival study Auditor's reports from 776 European firms (control sample of 799 firms with no KAM disclosure)	Qualified audit opinion (dep var.) DPOST*KAMFIRM (indep. var. of interest)	No significant association between adoption of IAS 701 and propensity to issue qualified audit opinions.

Audit delay			
Reid et al. (2019) Contemporary Accounting Research (CAR) (ABS 4)	Archival study Data from the UK 1,292 firm-year observations	Audit Delay (dep. var.) POST (indep. var.) – first two years after the new reporting regime	No significant change in audit delay in the post-KAM period.
AUDIT FEES			
Reid et al. (2019) Contemporary Accounting Research (CAR) (ABS 4)	Archival study Data from the UK 1,304 firm-year observations	Audit fees (dep. var.) Post (indep. var.); first two years of the new reporting regime	No significant change in audit fees in post-KAM period.
Gutierrez et al. (2018) Review of Accounting Studies (RAST) (ABS 4)	Archival study Data from the UK 2,652 firm-year observations	Audit Fees (dep. var.) Post + post*adopt (Post = years after implementation of the new reporting regime, Adopt = adopting firms (ind. var.)	No evidence that fees have increased following the new rules.
Li et al. (2018) Pacific Accounting Review (ABS 1)	Archival study Data from New Zealand 242 firm-year observations	Audit fees (dep. var.) Post (indep. var.) – first year of adopting the new regime	Significantly higher audit fees in the post-KAM period.
Hosseinniakani (2020) Dissertation	Archival Auditor's reports from 776 European firms (and a control sample of 799 companies with no KAM disclosures)	Audit Fee (dep. var.) DPOST*KAMFIRM (indep. var.)	Audit fees in European countries increased after the adoption of KAM (ISA 701).

4.6 Client consequences

The requirement to include KAM/CAM (or more generally to include extended audit disclosure) as part of the auditor's report may have effects on clients and the behavior of client management. Accountability theory suggests that the expectation of being held accountable and required to justify decisions may have an impact on decision making and, in the case of accounting, client managers' reporting behavior. Transparency theory also suggests that managers' reporting behavior may change as financial statement users get more information and, as a consequence, will be more likely to detect, for instance, earnings management attempts by client management. Below, we present and discuss papers that study the effect of KAM on client managers' reporting behavior (Reid et al. 2019; Gold et al. 2020). On the other hand, implementation of new regulation may have unintended consequences also on client management's behavior. One such unintended consequence could be that the KAM/CAM implementation can have an impact not only on the reporting behavior of client managers, but also on the real operating decisions that they make. This topic is investigated in the paper of Bentley et al. (2020) discussed below.

Reid et al. (2019) study the effect on financial reporting quality in firms listed on the London Stock Exchange (premium listing of equity shares) upon the implementation of material risk disclosures (RMM) in the auditor's reports. These disclosure requirements are somewhat similar to KAM, but are also slightly different and more comprehensive. They require auditors to include a discussion of the following in their reports: (i) assessed risks of material misstatement (RMM), (ii) the materiality threshold used in the engagement, and (iii) the scope of the audit. Reid et al. (2019) use three proxies for financial reporting quality: abnormal accruals, the propensity to just meet or beat analyst forecasts and the earnings response coefficient (ERC) (the results from the latter tests are discussed under "user reactions"). In addition, they investigate the effect on audit fee and audit delay. The findings suggest that both abnormal accruals and the propensity to just meet or beat analyst forecasts significantly decreased from the two years prior to the reporting changes to the first two years after the disclosure requirements are implemented, which indicates that the financial reporting quality has increased as a result of less earnings management. To minimize the risk of contemporaneous events confounding the results, they make use of two control groups: (i) European companies and (ii) US companies. They find that firms with premium listing on the London Stock Exchange experienced significantly greater improvements in financial accounting quality, subsequent to the implementation of changes in the auditor's report.

Gold et al. (2020) study the impact of KAM on managers' reporting decisions. In an experimental study with a 3x1 between-subjects design, KAM disclosure is manipulated as no KAM, KAM with firm-specific content and KAM with non-firm-specific content. 143 German managers participated in an experiment in which the participants got information about the case company including the last year's financial statement and information about the matters that were discussed in the management letters (goodwill impairment testing, among other things) and the auditor's report including KAM information according to the level of manipulation. The respondents were then asked to indicate the goodwill impairment amount they would prefer. As participants in the KAM conditions chose significantly lower impairment losses than those in the no KAM conditions, the findings indicate that the implementation of KAM as a compulsory part in the auditor's report can play a role in limiting aggressive reporting behavior by client management.

Prior research on disclosures shows that managers have incentives to avoid costly disclosures (e.g. Verrecchia 2001) and that they may choose to avoid them by, for instance, adjusting the real operating decisions they make (e.g. Graham, Hanlon, and Shevlin 2009). Bentley et al. (2020) investigate whether CAM disclosures have such an effect on managers' real operating decisions by conducting three different experiments. In two of the experiments the participants are asked to make a loan issuance decision, whereas in the third experiment the participants make a risk management decision. US EMBA students and experienced corporate managers recruited from Qualtrics Panel Management participated in the experiments, and Bentley et al. (2020) find that the inclusion of a CAM paragraph in the auditor's report makes the managers involve more in risk-increasing activities than in risk-decreasing activities,

presumably because the CAM information may be seen by users of accounting information as the auditors giving support to the client's underlying economic activities as these are not discussed in the CAM.

Table 5. Client consequences

Author	Data	Dependent & Independent variable	Findings
Reid et al. (2019) CAR (ABS 4)	Archival study Data from the UK Year 2013 and 2014 1,088; 888; 884; 1,304 and 1,292 firm-year observations (depending on type of test)	Financial reporting quality (abnormal accruals), audit fee, audit delay Risk of material misstatement (not the same as ISA 701 KAM)	Significant improvement in financial reporting quality. No effect on audit fee and audit delay.
Gold et al. (2020) International Journal of Auditing (ABS 2)	Experimental study; goodwill impairment 3x1 between-subject design; goodwill impairment 143 German managers	Goodwill impairment amount (dep. var.) KAM reporting (absent – firm-specific content – non-firm specific content) (indep. var.)	Effect on limiting client's aggressive reporting behavior.
Bentley et al. (2020) The Accounting Review (ABS 4*)	Experimental study; investment decision task Experiment 1: 2x2 between-subject design 132 US EMBA students Experiment 2: 2x2 between-subject design 181 experienced corporate managers (Qualtrics panel) Experiment 3: 2x3 between-subject design 140 experienced corporate managers (Qualtrics panel)	Risk of loan (risk-increasing – risk-decreasing) and CAM reporting (absent – present) (indep. var.) Loan issuance (dep. var.) Risk of loan (non-extreme – extreme) and CAM reporting (absent – present) (indep. var.) Loan issuance (dep. var.) Risk of loan (risk-increasing – risk decreasing) and CAM reporting (absent – present – disclaimer CAM) (indep. var.) Loan issuance (dep. var.)	Effect on investment decision.

4.7 Conclusion on client consequences

As we see from the presentation above, see also Table 5, prior literature on the consequences of KAM/CAM is relatively sparse. There is some evidence (Reid et al. 2019) suggesting that RMM disclosure may lead to less abnormal accruals, which can be interpreted as indicative of higher financial reporting quality and audit quality and less earnings management. There is also some evidence that KAM disclosure may have a positive impact on client management reporting behavior (less aggressive reporting) (Gold 2020), but, at the same time, one study (Bentley et al. 2020) finds that the CAM

requirements may have an impact on client management's real operating decisions letting them involve more in risk-increasing activities.

4.8 User consequences

CAM/KAM is included in the auditor's report as a means to reduce the information gap that is described in prior studies such as Mock et al. (2013). Ever since CAM/KAM was suggested, researchers started projects to clarify the effects of this change. One topic that has been thoroughly investigated is the effect of CAM/KAM on users of accounting information and the expectation that the inclusion of CAM/KAM paragraphs will have an impact on information value. A concern on behalf of regulators has been that KAMs quickly will be reported in a standardized format, which will reduce their informational value for the users of the auditor's report (IAASB 2017), and that non-professional investors are not fully able to use the information provided (Cox 2006), thereby not closing the information gap as much as intended. Below, we present and discuss papers in this stream of research structured after the user group involved, see Table 6 for an overview of the papers discussed.

4.9 Investors

One possible effect of the KAM disclosures is that users perceive firms with KAM or RMM paragraphs in the auditor's report as having higher information and financial risk. Some early evidence from experiments suggest this (e.g. Christensen, Glover, and Wolfe 2014). There are also some archival studies suggesting that investors at least to some extent respond to KAM and RMM disclosures.

Christensen et al. (Ibid.) investigate whether the inclusion of a CAM paragraph related to a fair value estimate (unrealized investment gains) in the auditor's report has an impact on non-professional investors' willingness to change an investment decision. 141 business school graduates who have experience investing in individual shares participated in an experiment in which they were given information about and asked whether the reported income in a described company would lead them to stop investing in the company or not. The answer to the question is measured on an 11-point scale from "No" (0) to "Yes" (11). The independent variable is manipulated with three different treatments: (1) a traditional auditor's report (2) the traditional auditor's report with an included CAM paragraph describing the valuation problems related to the company's unrealized investment gains, and (3) the traditional auditor's report and the same information as in the CAM paragraph included in the company's financial statement as a standard footnote disclosure. Findings indicate that when it comes to CAM there is both an information effect (respondents are more likely to stop investing when they receive CAM information compared to a situation when they only get the traditional auditor's report) and a source of credibility effect (respondents are more likely to stop investing when they get the accounting information in the auditor's report than as a standard footnote).

Using eye-tracking technology, Sirois, Bedard, and Bera (2018) study whether the inclusion of a KAM paragraph in the auditor's report have an impact on how users acquire information. 98 accounting graduate students participated in a 1x4 between-subject experiment in which they are asked to take the role of a junior loan officer and then asked to credit rate the case company, decide to approve or disapprove a loan application from the case company and, assuming the loan to be granted, give recommendations on size and interest rate terms of the loan. The study shows that when a KAM is included in the auditor's report, the respondents pay faster and more attention to the disclosures in the financial statements that are related to the KAM. When several KAMs are included, however, respondents pay less attention to other parts of the financial statements.

Bentley et al. (2018) use an adapted version of the Christensen et al. (2014) experiment, and they ask the respondents to provide their investment intentions in the case company as well as their perceptions of how much influence the management in the case company and its auditor has had on the case company's financial reporting quality. Findings indicate that non-professional investor are less likely to invest if there is a CAM in the auditor's report compared to when the auditor did not identify a CAM in the case company.

Dennis et al. (2019) study the value relevance of disclosures about material measurement uncertainty reported by management and auditors, and whether including visual cues about the uncertainty in the financial statements has an impact. A sample of 490 respondents (253 recruited from the alumni database of two business schools and 237 recruited from Amazon's Mechanical Turk platform) representing non-professional investors participated in a 3x3 between-subject experiment in which they are provided with general information about a company, an income statement and fair value disclosures. The respondents assess the P/E of the given company. They then receive supplementary management information about the uncertainty as well as the auditor's report and assess the P/E once more. The information given is manipulated at three levels as absent, narrative and visual. Findings indicate that visual cues help users to understand the information given by the auditor. Dennis et al. (Ibid.) also extend the findings in Christensen et al. (2014), showing that source credibility has an impact on the use of financial statement information. Their findings suggest that when managers and auditors provide information about the same issue, both types of information are value-relevant for users of financial statements.

Kachelmeier et al. (2019) study, among other things (see further description of study above and in Tables 4 and 6), the impact of CAM disclosure on financial statement users' confidence in the financial statement. Findings indicate that confidence is lower when a CAM is present than when it is not.

Ozlanski (2019) makes use of a 2x2 between-subject experiment, testing whether the effect of including a CAM paragraph in the auditor's report is affected by the accounting issue described in the CAM being governed by a precise or an imprecise accounting standard. 148 non-professional US investors recruited from the Qualtrics Lab participated in the experiment in which they are asked to assess the reporting credibility of the managers in a case company. The answer to the question is measured by a

composite credibility score as well as a measure of stock price revision. The first independent variable is manipulated as no CAM paragraph included or CAM paragraph included. The second independent variable is manipulated so that the accounting issue described in the CAM is either regulated by a precise or an imprecise accounting standard. Findings show that the user's assessment of client management's reporting credibility is affected by the precision of accounting regulation so that the credibility is affected when accounting precision is high, but not when accounting precision is low.

Reid et al. (2019) study the effect on the earnings response coefficient (ERC) when RMMs are disclosed in the auditor's reports. They find evidence of higher ERCs after the RMM disclosure is implemented, which they interpret as evidence of investors perceiving financial reporting quality to be higher after the implementation of the extended auditor's report. Gutierrez et al. (2018) also investigate whether RRMs hold investor relevant information. They use two proxies for investors' reactions, abnormal returns and abnormal trading volume, on a sample of firms listed on the London Stock Exchange (premium listing of equity shares). They find no evidence that KAMs hold price relevant information.

Køhler, Ratzinger-Sakel, and Theis (2020) study the informative value of a KAM paragraph relating to goodwill impairment. 89 German, US, UK and Canadian Certified Financial Analysts (used as a proxy for investment professionals) participated in a between-subjects experiment in which they were asked to assess the economic situation of the firm described in the case. The information content of the KAM paragraph in the auditor's report is manipulated as either "positive" (only large changes in the assumptions could lead to the necessity of a goodwill impairment) or "negative" (even small changes in the assumptions could lead to impairment being necessary). Findings indicate that this KAM paragraph has an impact on professional investors as they assess the economic situation to be better in the negative condition than in the positive condition. 69 German accounting students (proxy for non-professional investors) also participated in the experiment, but the KAM paragraph is not found to have any informational value for this user group.

Moroney et al. (2020) study whether investors' perception of the value of an audit as well as auditor credibility is affected by the inclusion of a KAM paragraph in the auditor's report using an experimental study. 198 Australian accounting master students, representing non-professional investors, participated in a 2x2 between-subject experiment, and findings indicate that the KAM paragraph only has an impact on investors' perceptions when the auditor comes from a non-big 4 auditor.

4.10 Creditors

Boolaky and Quick (2016) study the impact of inclusion of a KAM in the auditor's report on users of accounting information in an experimental case study. 105 bank directors participated in the experiment, and the design is a 2x2x2 between-subject design. A KAM describing a potential material misstatement caused by a difficult valuation issue is one of the manipulated variables in the study. The inclusion of this

KAM is not found to have a significant impact on neither the respondents' confidence in the financial statement, the quality of the audit, the value of the information in the auditor's report nor their willingness to grant a credit to the company in the case.

4.11 Board of directors

Kang (2019) conducted an experiment to investigate whether the prospect of a CAM disclosure has an impact on audit committee members' propensity to question managers' accounting estimates. The design is a 2x2 between-subject experiment, and the independent variables manipulated are investor sophistication and prospect of a CAM disclosure. 78 respondents with experience as audit committee members participated in the experiment. After reading information with general and financial information about a company, including information about a significant accounting estimate, the participants are asked to take the role as one of the audit committee members of the company and then told to prepare a list of questions they would ask the auditor and/or the CFO in the company. Findings from the experiment indicate that given a more unsophisticated investor base, audit committee members prepare more challenging questions to auditors/CFOs.

Table 6. User consequences

Author	Data	Dependent & Independent variable	Findings
	INVESTORS		
Christensen et al. (2014) Auditing (AJPT) (ABS 3)	Experimental study; investment decision task Main experiment 3x1 between-subjects (also other treatments included) 141 US business school graduates	CAM reporting (absent – absent but footnote disclosure – present) (indep. var.)	Effect on investment decision.
Gutierrez et al. (2018) Review of Accounting Studies (ABS 4)	Archival study Data from the UK Year 2011 to 2015 1,857 to 2,341 firm-year observations	Investor reaction, share price responses/abnormal share trading Other: audit fee, audit quality Risk of material misstatement (dep. var.)	No significant effect.
Sirois et al. (2018) Accounting Horizons (ABS 3)	Experimental study 1x4 between-subject design 98 Canadian graduate accounting students	KAM-reporting (absent – one KAM – three KAM – three KAM including description of audit procedures) (indep. var.) Eye fixation (dep. var.)	Effect on attention direction.
Dennis et al. (2019) The Accounting Review (TAR) (ABS 4*)	Experimental study 3x3 between-subject design 490 respondents (253 US business school alumni and	Disclosure of material misstatement uncertainty from management (absent – narrative – visual) and	Effect on information value.

	237 from Amazon's Mechanical Turk platform)	auditor (absent – narrative – visual) (indep. var.) P/E assessment (dep. var.)	
Ozlanski (2019) Advances in Accounting (ABS 2)	Experimental study 2x2 between-subject experiment 148 US non-professional investors recruited from Qualtrics Lab	CAM (present – absent) and precision of accounting standard (precise vs. imprecise) (indep. var.) Assessment of management's credibility and the company's stock price	Effect on investors only when the issue discussed in the CAM is governed by a precise accounting standard.
Reid et al. (2019) Contemporary Accounting Research (CAR) (ABS 4)	Archival study Data from the UK 1,304 firm-year observations	Financial reporting quality (dep. var.) measured by abnormal accruals and earnings response coefficient (ERC) Audit fees (dep. var.) Post (indep. var.); first two years of the new reporting regime	Significant improvement in financial reporting quality.
Kachelmeier et al. (2019) Contemporary Accounting Research (CAR) (ABS 4)	Experimental study Experiment 1: 1x5 mixed within-between-subject design 179 MBA students, 50 financial analysts, 23 plaintiff attorneys and 47 general business attorneys (all US)	CAM (present, two versions) – absent – audit procedures disclosed – CAM disclosure, no CAM identified) (indep. var.) Assessment of financial statement confidence and the auditor's responsibility for the misstatement	Effect on investors/users.
Køhler et al. (2020) Accounting in Europe (ABS 2)	Experimental study 1x2 between-subject design; goodwill impairment 89 investment professionals from Germany, the US, the UK and Canada and 69 non-professional investors	KAM (positive – negative wording) (indep. var.) Assessment of economic situation and confidence in making the assessment (dep. var.)	Effect on professional investors. No effect on non-professional investors.
Moroney et al. (2020) European Accounting Review (EAR) (ABS 3)	Experimental study 2x2 between-subject design 198 Australian accounting master students	KAM (absent – present) and firm (Big 4 – Non-Big 4) (indep. var.) Perceived audit value and auditor credibility (dep. var.)	Effect on perceived audit value and auditor credibility when auditor is a non-big 4 auditor. No effect when auditor is a Big 4 auditor.
CREDITORS			
Boolaky and Quick (2016) International journal of auditing (IJA) (ABS 2)	Experimental study 2x2x2 between-subject design 105 German bank directors	KAM reporting (absent – present) (indep. var.) Confidence in the financial statement, perceived audit quality, the value of the information in the auditor's report, willingness to grant a credit (dep. var.)	No effect.
BOARD OF DIRECTORS			

Kang (2019) Accounting, Organizations and Society (AOS) (ABS 4*)	Experimental study 2x2 between-subject design 78 US respondents with audit committee experience	Prospect of CAM disclosure (absent – present) and investor sophistication (indep. var.) Prepared questions (dep. var.)	Effect on prepared questions to auditor/CFO.

4.12 Conclusion on effect on user groups

Most research in this area study the impact of KAM/CAM on investors. One paper studies the impact on bankers, and another studies the impact on boards of directors. We also see from Table 6 that all the published papers studying the impact of KAM/CAM/RMM on different user groups, with the exception of Gutierrez et al. (2018), use an experimental design. Whereas findings in the areas of auditor and client consequences summarized in this paper show somewhat mixed results, the majority of papers focusing on user groups show that the inclusion of KAM/CAM in the auditor's report seems to have an effect on user behavior. Still, the only archival study, Gutierrez et al. (2018), fails to find that KAMs hold any price relevant information.

5 Overall conclusion and practical implications

The overall findings from the reported research on consequences of KAM/CAM are mixed and inconclusive. The intended consequences of KAM reporting have been controversial, and it may be that the intended consequences of increased information value and decision usefulness will not be fully reached.

Based on the archival research in the three areas discussed in this review, the impact of KAM disclosure appears to be non-existent or at best very small. There is some evidence to suggest an increase in audit fees, but this finding is contradicted by other researchers that have reported no audit fees effects in their studies published in top ranked journals. The limited research on the impact on auditor reporting and audit delay provides further support for no real KAM disclosure effect on auditor behavior. There is not much evidence to indicate that KAM disclosures impact users' or clients' behaviors, except for one paper that indicates an improvement in financial reporting quality. We note that there are very few archival studies yet to be published in the higher ranked accounting journals.

Based on the experimental research that focuses (mostly) on CAM, there are in general more significant findings and indications of a behavioral impact. However, as noted by the PCAOB, the experimental studies reported "vary and are sometimes contradictory," such that it is "difficult to draw generalizable conclusions" (PCAOB 2017, 94; Kachelmeier et al. 2019). One should also consider that many of the experimental papers use participants that are less sophisticated compared with the typical reader of the auditor's report, casting some doubt about whether findings are directly transferable to a "real life setting". The experimental research on auditor consequences indicate that the KAM requirement

could lead to both less skeptical judgements and skeptical actions by the auditors, but such effect appears dependent on the specific circumstances in each case. This implies that there can be unintended negative consequences of requiring KAM disclosures. Also, the evidence on auditor liability indicates some unintended (negative) consequences as several papers (published in top journals) found support for reduced auditor liability, as perceived by jurors, under a CAM regime. One of the key assumptions for the impact of KAM/CAM disclosures is that auditors' liability should increase because of disclosing more client-specific information that leads to increased scrutiny of clients' accounting choices. If these preliminary findings hold true, the positive effects that were expected by the IAASB (and PCAOB), such as improved audit quality and less earnings management, are unlikely to be realized. Both researchers and regulators should in their future work try to understand what could explain the reported findings.

On the positive side, there is some evidence of less aggressive accounting choices in the post-KAM period. Furthermore, there is support from multiple papers of a user impact of CAM, suggesting that the new reporting regime could provide some additional information that is useful to investors (and other users). One need to apply the implications of these positive signs with caution, since the impact might appear only for some user groups and for some type of auditors. There are also studies that fail to find any user impact of the new disclosure requirement, so it is too early to conclude.

The research activity in the area is still high, and future research could help to further indicate and eventually confirm the various potential implications of the new reporting regime. Based on the available evidence at this point, the overall impact of the KAM/CAM disclosure requirement appears to be limited, and while there are some positive indications, there are also findings that suggest negative unintended consequences.

The practical implications of the findings are not straightforward. It is, however, evident that the existing empirical evidence is unable to convincingly confirm (all) the expected positive effects as outlined by the IAASB. There are several reasons for not finding evidence of an impact of KAM in the three areas reviewed. First, it is not obvious that the new requirement will actually change the behavior of auditors and client management as suggested in the following statement made by a respondent in a study by Reid et al. (2019, 1506): "Since the only new requirement is for the auditor to report what they have done during the year, this may not affect the behavior of management or the auditor". Second, the information disclosed in KAMs may already be known to the user (that actively reviews figures and footnotes presented in the financial statements). As explained in the descriptive part, KAMs on intangible assets, goodwill impairments etc. are very common, and it is likely that a sophisticated user of audited financial statements is able to realize that goodwill depreciation and valuation of intangible assets constitute a risk factor simply by analyzing the financial information and without considering the information revealed in KAM. Third, there is a risk that the information revealed in KAM, in contrast to the purpose and intention, are perceived to be standardized "boilerplates" and not very firm-specific after

all. The firm-specific dimensions are likely important if KAM reporting should be regarded as informative and valuable by users of audited financial statements in the future.

6 Future research

Based on our review of the literature on KAM/CAM, we have documented that the consequences of this new reporting regime have now been investigated by a substantial number of empirical studies. However, there are still several interesting venues for future research. We present some of them below.

First, using available archival data from one or several countries, one could test the consequences of KAM reporting on the cost of capital and analysts' forecasts. Such studies could inform whether and how the information revealed in KAM is able to reduce the information risk for creditors and financial analysts. Here it could also be interesting to analyze whether the perceived information risk is related to the type of KAM disclosed.

Second, the reporting practices and behavioral responses may vary between countries. Future research could therefore analyze cross-country differences between countries with different institutional characteristics such as investor protection, legal enforcement, rule of law, strength of auditing and financial reporting standards and cultures. Here, one could also consider testing whether the differences between KAM and CAM impact the behavioral responses.

Third, we note an opportunity for future studies collecting data using questionnaires and interviews. These approaches allow for analyzing new aspects and consequences of KAM and enhancing our understanding of the reasons for why auditors, clients and users respond in a certain way to the new information provided.

Fourth, we note an opportunity to study KAM/CAM reporting practices and actions undertaken by Financial Supervisory Authorities (e.g. PCAOB). Oversight bodies should ensure the relevant implementation and application of new auditing standards such as ISA 701 and AS 3101. Future research could investigate the conclusions of documented findings during inspections and in which situations and under what circumstances that it is most common that the quality of KAM reporting is found insufficient. One could also study whether the KAM reporting behavior changes because of more disciplinary sanctions and increased sanction risk/cost that are likely in the future. The relevance of the KAM reporting is likely dependent on efficient oversight and guidance to enhance auditor incentives to provide client-specific information.

Last, it could be interesting to investigate the process leading up to the ISA 701 standard. Which commentators have been heard and not? What lobbying efforts have been made in order to try to change the standard in one direction or the other?

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