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Author(s): Rautiainen, Antti; Saastamoinen, Jani; Pajunen, Kati

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Do key audit matters (KAM) matter?

Auditors' perceptions of KAM and audit quality in Finland

Antti Rautiainen*, Jani Saastamoinen** & Kati Pajunen***

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Abstract

Purpose: Key Audit Matters (KAM) in ISA 701 seek to enhance the value of the auditor's report by increasing the transparency of how the audit was performed. This article examines how professional auditors themselves perceive the impact of KAM on audit quality and audit effectiveness.

Design: Statistical analyses of an electronic survey of certified public auditors in Finland.

Findings: Regarding the perceptions of KAM, we found two dominant views on auditing: *quality* and *efficiency*. In general, the respondents did not consider that KAM improve audit quality. However, auditors focusing on efficiency considered that KAM make the audit process more fluent. Further, the use of KAM may facilitate audit effectiveness and cooperation between auditors and managers. We also found three factors related to the KAM processes and auditing work: *effectiveness*, *risks*, and *workload*.

Practical implications: Auditors may employ KAM to provide focus in their work. This facilitates balancing between the demands for added value while keeping the workload and audit risks at a tolerable level.

Originality: This study contributes to the emerging literature on KAM as well as to the literature examining practitioner views of changes in auditing regulation. It is, as far as we know, the first study to report survey evidence on how certified public auditors themselves perceive KAM and the effects of KAM on audit work in an EU country context.

Research paper.

Keywords: Audit, quality, KAM, ISA, survey

*Antti Rautiainen, JYU, corresponding author, antti.i.rautiainen@jyu.fi

** Jani Saastamoinen, UEF

*** Kati Pajunen, JYU.

1. Introduction

In an audit report, a certified public auditor (CPA) conveys his or her views of a client's financial disclosure to users of financial statements and other interested parties (Libby, 1979). However, audit reports have been criticized for failing to reveal key information and detailed views of the audit focus or of the organization in question (PCAOB, 2013). In short, there are demands for disclosing relevant and value-adding key information; and there is an expectations gap between expectations and the actual delivered information in the audit (see Christensen et al., 2014; Köhler et al., 2020; Mock et al., 2013; Boolaky and Quick, 2016; Sirois et al., 2018).

To meet the demands for disclosing key information, the International Auditing and Assurance Standards Board (IAASB) issued the ISA 701 standard in 2015. The standard mandates the auditor of a publicly traded company to disclose *key audit matters* (KAM) in the audit report (Sierra-García et al., 2019). ISA 701 is expected to increase transparency and the quality of auditing (Segal, 2019). It should also provide information on the key issues in the audit and on which areas of the financial statement involve most discretionary items decided by the management thereby being the riskiest (ISA 701, 1.2). Explicit consideration of KAM may help focusing the audit, but additional reporting and analysis obviously also means more work for auditors. In a similar manner, the U.S. Public Company Accounting Oversight Board's (PCAOB) issued a related standard AS 3101 mandating disclosures on *critical audit matters* (CAM) in 2017¹. CAM or KAM, like any auditing and accounting standard change, is expected to improve the trust and legitimacy of financial reporting (see e.g. Holm and Zaman, 2012), i.e. to reduce information asymmetries between investors and auditors and provide investors with context regarding the company's financial reporting (Cody, 2018).

KAM (or CAM) reporting is fairly new topic, and empirical evidence on the effects of KAM is so far relatively limited. Experimental evidence suggests that KAM disclosures direct the user's attention in the financial statement (Christensen et al., 2014; Gimbar et al., 2016; Sirois et al.,

¹ In general the terms CAM and KAM relate to similar issues and can even be used interchangeably. The differences of CAM and KAM include for example that CAM relate to challenging, subjective, or complex auditor judgments, while KAM relate to significant judgments with high uncertainty, i.e., there need not be subjectivity.

2018). There is some evidence from New Zealand that KAM disclosures improve audit quality but also increases the cost of audit (Li et al., 2019). Moreover, KAM appear to reduce the auditor's liability (Pratoomsuwan and Yolrabil, 2020), and a removal of KAM may increase the assessment of auditor's negligence (Vinson et al., 2019). However, non-professional investors (Köhler et al., 2020) and bank directors (Booakay and Quick, 2016) appear to glean little insight from KAM disclosures. Furthermore, recent research suggests that the auditor's characteristics influence KAM disclosures (Sierra-García et al., 2019). For instance, investors perceive value in a KAM report only if the audit is performed by a non-Big 4 auditor (Moroney et al., 2020).

However, there is limited knowledge on how professional public auditors perceive the effects of KAM regulation on audit quality and audit process. Segal (2019) interviewed a fairly limited number of South-African auditors and found that they consider KAM disclosures failing to improve transparency and that clients largely ignore them. However, until now there is little research on how KAM are perceived in Northern European and EU context. To address this gap in the literature, we investigate Finnish auditors' perceptions of whether disclosing the key audit matters does matter in practice. In addition, we shed light on how auditor characteristics predict practical perceptions (because auditor's characteristics can affect e.g. audit work and audit quality, see e.g., Eshleman and Guo, 2014; Ittonen et al., 2013; Joshi et al., 2008; Knechel et al., 2013,). Consequently, this paper asks: *do professional auditors perceive that key audit matters matter?*

To answer this, we examine a survey of Finnish auditors. The respondents were obtained from the member register of the Finnish auditor association, which has an extensive member coverage among the CPAs in Finland. The member register has been used as a data source in several prior studies (e.g., Niskanen et al., 2011; Pajunen and Saastamoinen, 2013). We focus on a single country setting because a highly regulated background, education and experience requirements make the Finnish CPAs a homogeneous population compared to other European countries (e.g., Sundgren, 1998). A single country focus also controls for the heterogeneity caused by cross-country variation in audit practices (Hope et al., 2012), so that heterogeneity in institutional settings does not affect the results. It is possible however that the perceptions and views expressed by Finnish CPAs reflect European auditors' views of KAM reporting more generally.

Our results indicate that auditors have a critical view of KAM reporting. Younger auditors seem to perceive that that explicit consideration of KAM may influence audit effectiveness and focus audit work. This paper contributes to the literature on auditing research focusing on the impacts of KAM reporting as perceived by the professional auditors themselves. While previous research has mostly relied on experiments on students (e.g., Christensen et al., 2014; Sirois et al., 2018), interviews of a relatively small sample of auditors (Segal, 2019), or discretionary accruals (Kitiwong and Sarapaivanich (2020)), we provide first-hand evidence on how the majority of professional auditors in a European country perceive the merits of KAM reporting. To our best knowledge, this approach has not been taken in the literature before. We also contribute to the expanding literature on survey-based studies of accounting professionals' perceptions of accounting standards and regulatory changes (Chand and White, 2006; Joshi et al., 2008; Kumarasiri and Fisher, 2011; Pajunen and Saastamoinen, 2013; Saastamoinen et al., 2020).

This article is organized as follows. Section 2 discusses earlier research on audit quality following regulatory changes. Section 3 describes the data and methodology. Section 4 presents quantitative and qualitative empirical results. Section 5 concludes the paper.

2. Literature review

2.1. The purpose of KAM disclosures

Recent changes in audit reporting have focused on highlighting issues that the auditor judges as important to users of financial reporting. In 2016, IAASB issued ISA 701 which requires a key audit matter disclosure in the auditor's report. The standard states that "communicating key audit matters provides additional information to intended users of the financial statements ("intended users") to assist them in understanding those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period." In a similar manner, PCAOB issued a requirement for a critical audit matters disclosure in the US. CAM include matters that "inform investors and other financial statement users of matters arising from the audit that involved especially challenging, subjective, or complex auditor judgment, and how the auditor addressed these matters" (PCAOB, 2017). It should be noted that although their definitions differ to some extent (Gutierrez et al., 2018), determination

of a CAM or a KAM disclosure is relatively similar under PCAOB's and IAASB's approaches (see IAASB, 2017; Jermakowicz et al., 2018).

ISA 701 is expected to improve audit quality (Segal, 2019). There are several definitions for audit quality in the research literature (e.g. Watkins et al, 2004; Knechel et al., 2013). A well-known definition by DeAngelo (1980) regards audit quality as the joint probability that an auditor both detects and reports a breach in a client's accounting system. In the professional audit literature, the concept of audit quality includes controls beyond the accounting system alone but is still rather straightforward: following standards and other regulation in the audit process (e.g. Watkins et al., 2004). IAASB (2014) defines a framework for audit quality based on the service provider's process so that audit quality means, for example, that the process follows the regulations, and there is enough competence and time to perform a high-quality audit. Knechel et al. (2013) list several characteristics that can influence audit quality: economically motivated responses to risk (e.g. incentives), an uncertain and unobservable level of assurance (uncertain outcome), the unique characteristics of each client (uniqueness), the systematic nature of auditing (the process), and the audit team's knowledge and level of expertise (the professional judgement).

ISA 701, para 9, states that KAM disclosure needs to be decided based on the areas where the financial statement most likely includes risks of significant inaccuracy or errors or management discretion. Selecting the most risky focus areas, however, includes subjectivity and is vulnerable to management influence (see Bowlin, 2011). ISA 701, para 18, also includes documentation requirements for the audit process. For instance, the standard requires documentation which relates to where the limited audit resources are concentrated. Following Segal (2019) and Holm and Zaman (2012) on the general aims of standard-setting, and viewing the presentation of KAM in audit reports through the lens of audit quality, we state our first research question.

RQ1: Do Finnish CPAs perceive that KAM reporting improves audit quality?

2.2. Reception of Key Audit Matters

Prior to ISA 701, several studies investigated potential impacts of KAM reporting. In an analysis of comment letters to the IAASB concerning ISA 701, Cordos and Fulöp (2015) report that while

attitudes towards the standard were generally positive, concerns, such as audit process delays and a difficulty of selecting “the right things” to report, were also raised.

A clean auditor’s report is generally used as an indicator of trustworthy and legitimate financial reporting (e.g., Holm and Zaman, 2012). Further, time lags and work process issues may portray audit efficiency, and discretionary accruals and financial restatements (or e.g. reporting changes) and auditor independence are used as proxies for audit effectiveness (e.g. Knechel and Sharma, 2012), even if the concepts are difficult to measure. The quality and value-added of accounting or auditing report further relates to information relevance (Holm and Zaman, 2012; IFRS conceptual framework; Vanstraelen et al., 2012). However, it is not entirely clear who are the users of audit reports (Vanstraelen et al., 2012). Further, KAM may have little value to users because they provide more detail on the auditor’s work and less detail on the client, a trend that is not necessarily very relevant to investors (see Abdullatif and Al-Rahahleh, 2020; Köhler et al., 2020).

Furthermore, it is not clear which matters require more attention from the auditor or what are the implications of KAM on audit quality, efficiency, effectiveness and workload as assessed by auditors themselves. For example, an increased workload may reduce the quality and efficiency of audits (see e.g., Lopez and Peters, 2012). Audit efficiency may be defined as minimizing resources used in the audit (Pincus et al., 1999), but the impact of KAM on auditor workload and perceived efficiency remains unclear. Consequently, we ask the following research question:

RQ2: Do Finnish CPAs perceive that KAM reporting affects audit efficiency or workload?

Several experimental studies have addressed expected impacts of KAM disclosures. In an experiment on bank directors, Boolaky and Quick (2016) report that KAM disclosures are largely inconsequential as they fail to affect the perceptions or decisions of German bank directors. They also note that KAM do not influence the information value or quality of audit reports. An experiment by Brasel et al. (2016) note that critical issues selected and disclosed in the audit report also affect the auditor’s liability. Nevertheless, they see that the key issue reporting facilitates keeping the responsibilities and legal sanctions expected by the auditors under control.

Further, Sirois et al. (2018) study how KAM reporting affects the analysis of the financial statement in an experiment involving university students. They find that users of financial statements pay more attention to those notes and details which have been reported as KAM in the audit report. However, if there are several KAM issues, a risk is that other financial statement information receives little attention. This finding is corroborated by Moroney et al. (2020) who report that KAM reporting draws investors' attention to new areas away from the core of the audit report. However, Li et al. (2019) report that audit quality increases with KAM reporting although with a corresponding increase with audit fees. This suggests that it may be reasonable to select a few key issues, including at least one relatively general issue.

Christensen et al. (2014) study how investors' fair value considerations can be affected by presenting critical audit matters (CAM) in an audit report instead of presenting the same information in management's footnotes. They find that issues presented as CAM are more likely to discourage the participants of the experiment in investing in the company compared to the cases in which the same information was presented as management's footnotes, or when the participants received a traditional audit report. They find however that the effect of CAM is smaller when an auditor report also presents a paragraph that offers a resolution to the raised CAM.

There is no consensus on whether the inclusion of CAM in the auditor's report will reduce the auditor liability. Reporting CAM in the audit report can alert users of the financial statements and audit reports that there are risks in financial statements and thus protect the auditors (Kachelmeier et al., 2019). Gimbar et al. (2016) examine CAM reporting related to leases under precise and imprecise standards. Principle-based standards are seen as imprecise standards, which involve more skill and judgement by the auditor. They find that reporting CAM increases the auditor's liability more under precise as opposed to imprecise standards. On the other hand, Kachelmeier et al (2019) find that disclosures on CAM in the auditor's report forewarns users about potential misstatements in the financial statements if there is a high measurement uncertainty. Brasel et al. (2016) report that CAM disclosures tend to reduce the auditor's liability concerning undetected misstatements, which would be difficult to assess if CAM were absent. However, they suggest that auditors could have incentives to report boilerplate CAM to protect them from liability, which would dilute the original intent of CAM.

Empirical studies of the effects of KAM disclosures on the quality or effectiveness of auditing have remained limited. Before the IAASB's and PCAOB's revisions to the audit standards, France and the UK introduced similar requirements to public firms. Since 2003, the French listed firms were required to report the justification of assessments (JOA), which can be regarded as a precursor of KAM disclosures (Bédard et al., 2019). Market reactions suggest that while audit costs or audit quality remain unaffected, JOAs make the presentation of the audit report more time consuming, which has a negative impact on the efficiency of an audit (Bédard et al., 2019). In 2013, large public companies in the UK were mandated to issue an expanded auditor's report which provided information similar to KAM disclosures in regard to the auditor's identification of the assessment and disclosure of risks of material misstatement (Gutierrez et al., 2018).

An expanded audit report appears to have limited incremental value to investors and little impact on audit fees or audit quality (Gutierrez et al., 2018). However, recent evidence from New Zealand (Li et al., 2019) and the UK (Reid et al., 2019), point to improved financial reporting quality following the adoption of KAM disclosures. Kitiwong and Sarapaivanich (2020) also found some evidence that KAM related to acquisitions improved audit quality, judged through discretionary accruals, in Thailand. Analyses of Australian public firms (Kend and Nguyen, 2020) and US filers (Burke et al., 2020) suggest that many companies disclose only one KAM issue, with the most common topics being goodwill, revenue recognition and business combinations. Thus, it is not clear whether KAM influence the audit process, risks, and audit effectiveness (seen as proper judgements made and as outcomes such as detection of fraud, e.g. by Pincus et al., 1999). The discussion above leads to our third research question regarding the effects of KAM as perceived by those Finnish auditors with practical experience in KAM reporting:

RQ3: Are KAM perceived as influencing audit effectiveness and risks?

2.3 Institutional setting

In Finland, auditing is regulated by Audit Act (1141/2015) and more generally by EU directive (2014/56/EU). An Audit Oversight body within the Finnish Patent and Registration Office monitors auditors in Finland. Moreover, the Finnish Association for Auditors provides guidelines on good audit practices. Such audit related regulation and guidance in general seeks to improve

audit quality and the information content of audit reports, as well as to mitigate the audit expectations gap as well as other agency and control problems (Porter, 1993; Francis, 2004; Gold et al., 2012; Gullkvist and Jokipii, 2013; Pajunen and Saastamoinen 2013; Ojala et al., 2014).

Finland has a multi-tier system of audit certifications, relatively similar to those of other Nordic countries (Denmark, Iceland, Norway and Sweden. The first-tier CPAs hold a KHT certification, which grants them a license to audit large firms. The basic or second-tier CPAs with a HT certification focus on small and medium-sized enterprises (Niemi and Sundgren, 2008). The two certifications differ in requirements: KTHs face more stringent requirements for education and training than HTs. For instance, a KHT auditor must have a higher university degree but a lower university degree suffices for a HT auditor (Sundgren, 1998). In addition to these certifications, the governmental and municipal sector auditors must hold a JHT certification. There is also an unlicensed category of laymen inspectors (not mentioned or considered as auditors in the Audit Act, and not studied in this research) that are voluntarily used by some small organizations, such as sports clubs and small housing companies, where an official auditor is not required because of the small size of the organization (e.g. Niemi and Sundgren, 2008).

3. Data and methods

This study uses a survey-based research methodology. Using the contact information of most Finnish certified public auditors, we sent an electronic survey questionnaire by e-mail to all those 1,408 certified public auditors, who had an e-mail address in the member register of the Finnish auditors' association in May 2018. One reminder e-mail was sent to the recipients after one week of the initial mailing. We used the median response time as a cutoff value and confirmed that late respondents and their responses were not statistically different from early respondents and responses. The survey instrument contained statements measured on the 5-point Likert scale and some open-ended questions. We received 283 responses yielding the response rate of 20.2%.

The survey instrument was two-fold. The first set of items included 14 statements (in Finnish) that were common to all respondents. Furthermore, eight statements were intended only for auditors

who had experience in KAM reporting². Since this is a new topic (KAM and auditor perceptions on quality and KAM effects), resembling an exploratory study, the statements were developed on the basis of the extant literature (see Table 1) by the researchers. Following Knechel et al. (2013) and Knechel and Sharma (2012), we formed statements related to audit quality and audit work focus, effectiveness, processes and risks, but also formed statements about the users, relevance, trust and value-added related to audit work and KAM reporting (e.g. Bowlin, 2011; Gutierrez et al., 2018; Holm and Zaman, 2012; Lopez and Peters, 2012; Vanstraelen et al., 2012; see also Köhler et al., 2020 for a recent view). It is however important to note that in this study audit quality, as an example, is not considered through discretionary accruals or other proxies but assessed as an auditor perception. Further, a certified public auditor assessed the validity of the survey instrument before the questionnaire was sent. The second installment of statements included eight statements probing the effects of KAM on audit practice (see Table 2). English translations of the statements are presented in Tables 1 and 2. The Likert scale was: 1 = Totally disagree, 2 = Somewhat disagree, 3 = Neutral, 4 = Somewhat agree and 5 = Totally agree. In addition, the survey instrument included some open-ended questions and collected data on the respondent's biographical background (age, auditor certification level, Big 4 affiliation, auditing experience, and gender).

We start with a descriptive analysis of auditors' general views on KAM, auditing and audit quality (Table 1), and on how KAM reporting manifests itself in practice (Table 2). Further, the answer patterns and the main factors (latent variables) behind the views and perceptions stated by the auditors are analyzed using exploratory principal component factor analysis (PCFA). First we analyzed the patterns and latent variables related to *audit and KAM views generally*, and second, we analyzed the patterns regarding KAM effects on *audit work processes* by those auditors that had made KAM reporting in practice.

Our first empirical model examines how perceptions of KAM focus correlate with the auditor's attributes. The regression model is

$$DepVar1 = \beta_0 Constant + \sum_{i=1}^k \beta_i Control_i + \varepsilon. \quad (1)$$

² Since the respondents of this subset of statements were self-selected, it is likely that they differ from other respondents in some respects. Indeed, we checked that those who reported experience in KAM reporting were statistically more likely to be younger, have a KHT certificate, and work for a Big 4 audit firm.

The dependent variables (*DepVar1*) are the two main latent variables extracted from general analysis of auditor views using principal component analysis, named later in the empirical part as “Quality” and “Efficiency”, suggesting either quality-based or efficiency-based views on KAM and auditing. The *Controls* include the biographical background attributes, such as age and Big 4, and a statistically significant coefficient suggests that the attribute is correlated with the perception of KAM reporting. Finally, ε stands for the error term.

We control for various attributes of the respondents, such as the three CPA certifications in the Finnish setting. The variables *HT*, *KHT* and *JHT* are dummy indicator variables taking the value one (and zero otherwise) if the respondent holds the respective certification. We also control for Big 4 auditors with a *Big4* dummy variable, because Big 4 predicts a higher audit quality (e.g., Eshleman and Guo, 2014). Further, experience in auditing may be associated with how a respondent perceives changes in the auditing standards. Hence, we include a continuous variable measuring the respondents experience in auditing in years (*Experience*). We also control for the respondent’s age with a continuous variable measured in years (*Age*). Finally, compared to their male counterparts, female accountants tend to be more conservative or critical (e.g., Niskanen et al., 2011; Ittonen et al., 2013; Saastamoinen et al., 2020). Consequently, we include a dummy variable for the female respondents (*Female*).

Our second empirical model examines how perceptions of audit work processes and KAM reporting correlate among those auditors with practical experience in KAM reporting while controlling for the respondent’s background. The model is

$$DepVar2 = \beta_0 Constant + \sum_{i=1}^j \beta_i Component_i + \sum_{i=j+1}^k \beta_i Control_i + \varepsilon. \quad (2)$$

The dependent variables (*DepVar2*) are latent variables extracted from the survey statements probing auditors’ views on KAM (by auditors with practical experience on KAM reporting) and its effect on auditor’s work processes, named in the empirical part as “Effectiveness”, “Risks” and “Workload”. Note that *Component* variables are Bartlett scores of the auditors’ perceptions of KAM reporting generally (the *DepVar1* in the model 1 above, i.e. Quality and Efficiency oriented views on KAM). As before, control variables include biographical background attributes.

To recapitulate, we use several statistical methods to analyze the data. The methods of analysis include descriptive statistics, principal component factor analysis (PCFA) and ordinary least squares (OLS) regression analysis using Stata 15 software. We run exploratory PCFA on survey statements and extract components that represent the respondents' perceptions of KAM reporting. After this, we use the Bartlett scores of these components as explanatory variables in regression analyses in order to better understand the views on audit work after the introduction of KAM. The Bartlett scores are standardized variables with the mean of zero and the standard deviation of one.

4. Results

4.1. Descriptive statistics

Table 1 includes the descriptive statistics of 14 survey statements which measure the respondents' perceptions of KAM reporting. The number of observations for the survey statements varied between 264 and 273. On average, the respondents had a clear opinion of KAM reporting: in every statement the mean answer was different from the neutral answer (3 in the Likert scale) and statistically significant at the 1% level.

TABLE 1

Typically, the respondents somewhat disagreed with the statements, which indicates that the respondents are critical and skeptical about KAM reporting. In particular, KAM reporting did not seem to increase the transparency of audit reports or value-added to investors. As our key results, it was revealed that according to Finnish auditors, KAM reporting was not considered to be a good thing (N=270, mean 2.330), and even more importantly *KAM reporting was considered not to improve audit quality* (N=273, mean 2.377). However, the respondents agreed (on statement 4) that *KAM improves audit efficiency* with a smooth audit process (N=269, mean 3.182). The positive views expressed in statements 5 and 6, in fact reflect the critical views on KAM, because in these statements the wording was reversed, such as “does not increase general trust” in order to control for answering the questions without reading them.

Table 2 includes the descriptive statistics of the eight statements which were answered only by auditors who had experience in KAM reporting. As before, the mean value is statistically different from the neutral value (3). Unlike in the previous set of statements, however, the respondents both agreed and disagreed with the statements. The respondents disagreed with the statements that KAM reporting increases the workload too much, KAM are easy to select and that KAM may improve the audit focus. Again, already the descriptive analysis reveals that the introduction of KAM was not perceived as increasing workload too much (N=109, mean 2.55). However, the respondents agreed that KAM reporting has operational influence and facilitates finding inefficiencies in internal controls. This suggests that KAM can lead to operational improvements and changes which may signal improved audit effectiveness (even if those changes did not amount to report re-statements, see e.g. Knechel and Sharma, 2012). The responses however also indicate that KAM are currently selected, in part at least, based on management's views (suggesting lower auditor independence) and sometimes only at the end of the audit process.

TABLE 2

Table 3 reports the descriptive statistics of the respondents' biographical background information. The average auditor is 53 years old male and has 22 years of auditing experience. Approximately 70 % of the respondent's work for a Big 4 auditing firm. Half of the respondents hold the KHT certification, 43 % report the lower tier HT certification, and 10 % the public sector-oriented JHT certification (note that a respondent may have several certifications). 27 % of the respondents report having KAM experience.

TABLE 3

4.2 Exploratory factor analyses

4.2.1 Perceptions of KAM reporting

In order to summarize the answering patterns as latent variables, we carry out a principal component factor analysis on the set of 14 survey statements presented in Table 1. The results are obtained using PCFA method of Stata 15 software with oblique (Promax) rotation because the correlation structure between components is unknown (see Mooi et al. 2018). The solution is

shown in Table 4. It includes two components with 11 variables³. The Cronbach alphas of the two components are relatively high (0.923 and 0.796), which indicates a good internal consistency. Together they account for over 90% of the variance. The components (main factors) found in our exploratory analysis are labelled as:

Quality (general audit quality focus) and
Efficiency (focus on efficiency in answering).

The Quality factor portrays the view that KAM reporting may increase audit quality, add general trust in auditing, and provide relevant information as well as value added to investors. The Efficiency factor depicts the view that audit processes are currently expected to be more efficient with fluent processes and communication among auditors and managers that add value to client companies, yet with clear responsibilities.

4.2.2 Perceptions of KAM reporting and audit work processes

Table 5 shows the exploratory PCFA solution for the work process statements for auditors who had experience in KAM reporting (see Table 2). These statements load on three components (basically factors). While the first factor has a good Cronbach's alpha value (0.748), it should be noted that alpha is relatively low (0.389) for the second factor, and the third factor only includes a single variable with a high loading for the auditor's workload. Nevertheless, the solution may provide some ideas concerning the issues behind auditors' perceptions of KAM reporting and its effects on auditor work. Consequently, these work process emphases, or factors, highlighted by the respondents are labelled as:

Effectiveness (usefulness and relevance),
Risks (Risks and well-planned KAM work), and
Workload (Impact on auditor workload).

TABLE 5

³ The three variables excluded from the factor solution based on a communality analysis were statements 3, 9, 13 in Table 1. They relate to communication between the auditor and management, investor value-added and the audit expectations gap.

The effectiveness factor portrays the emphasis that KAM reporting relates to focusing the work, finding internal control inefficiencies and bringing benefits to both the auditor and the client. The risks factor portrays audit-risk-based thinking in which the auditor first selects the focus areas in a well-planned manner and then executes the audit process (note the reversed scale of the last variable). The workload factor portrays the view that the auditor's workload is the key issue when considering responses to new reporting requirements.

TABLE 4

4.3 Regression analyses

4.3.1 Predictors of perceptions of KAM reporting

Table 6 reports the results of OLS regression analyses of predictors of Quality and Efficiency factors. The left-hand panel uses *Quality* as the dependent variable. The estimated coefficients show that the auditor's characteristics do not predict his or her perceptions of KAM reporting. The right-hand uses *Efficiency* as the dependent variable. The estimated coefficient on *Age* which is negative and statistically significant suggests that older respondents are less likely to agree with KAM reporting improving audit efficiency. However, a borderline significant positive coefficient on *KHT* indicates that auditors with the highest tier certificate may regard KAM reporting as positive for efficiency.

TABLE 6

4.3.2 Predictors of KAM reporting effects on audit work

We conduct OLS regression analyses of the *Effectiveness*, *Risks* and *Workload* factors to analyze which issues affect these emphases on the effects of KAM on audit work. The predictors in the model include the Bartlett scores for the quality and efficiency factors (components) and the biographical background variables. The results of these analyses are reported in Table 7. The number of observations is 84 because a limited number of auditors reported having experience in KAM reporting and answered to these questions. In addition, there were missing observations for background variables. The results shown in the left-hand panel show that the respondents scoring high on the efficiency variable consider KAM reporting being useful. The middle panel suggests that neither perceptions of KAM reporting are predictors of the *Risks* variable. The right-hand

panel indicates that a high score in *Quality* is negatively correlated with *Workload*. That is, auditors who perceive KAM improving quality do not regard KAM as auditor's workload centered matter.

TABLE 7

The control variables show that some characteristics predict an auditor's views on the KAM reporting effects on audit work. Regarding *effectiveness*, a JHT certificate is a positive predictor of viewing KAM reporting as effectiveness related issue. However, being female points in the opposite direction. Concerning *Risks*, age is a marginally significant positive predictor, whereas being female is a marginally significant negative predictor of seeing KAM as an audit risk matter.

5. Conclusions

5.1 Discussion

KAM reporting is a relatively new focus area of auditing research. In this paper, we contribute to this novel area by providing, as far as we know, the first survey-based inquiry into certified public auditors' perceptions of KAM reporting in an EU country context. Previous research has relied on experiments with university students (e.g., Christensen et al., 2014; Sirois, et al. 2018), on interviews of a limited number of audit experts (Segal, 2019), or on discretionary accruals (recently e.g. Kitiwong and Sarapaivanich, 2020). However, little is known about how audit practitioners personally see KAM reporting, and how it might facilitate audit work and affect audit quality. To address this gap in the literature, we conducted a survey of most Finnish certified public auditors concerning their perceptions of the effectiveness of KAM reporting.

As per to **RQ1** (Do Finnish CPAs perceive that KAM reporting improves audit quality?), the descriptive analysis of survey statements suggests that Finnish auditors are critical and skeptical about KAM and their potential in improving audit quality. Next, regarding **RQ2**: (Do Finnish CPAs perceive that KAM reporting affects audit efficiency or workload?), the descriptive analysis suggests that the use of KAM *improves audit efficiency* with a smooth audit process (N=269, mean 3.182) but does not increase the workload too much.

In our PCFA analysis, we first found two general emphases for KAM (two extracted components or factors: *Quality* and *Efficiency*). In general audit quality seemed to guide the answer patterns of Finnish auditors as it was the strongest factor found. The respondents who focused on audit quality in their answers are more inclined to feel that KAM reporting increases trust in auditing, diminishes the audit gap, and provides relevant information. This finding allows a contribution that personally auditors in the Nordic context are skeptical that KAM can improve audit quality. But generally, the strong quality focus in answers can be congruent with Li et al. (2019) who report an increase in audit quality following increased reporting in New Zealand. The auditors with a focus on efficiency are more likely to perceive that KAM reporting makes the audit process more fluent, improves cooperation between auditors and managers, clarifies the responsibilities of auditors, and helps to provide more added value. An examination of auditor attributes indicates that they have little predictive power in how auditors perceive KAM reporting. Older auditors appear to be less convinced about KAM improving audit efficiency (see Table 6).

Regarding **RQ3** (Are KAM perceived as influencing audit effectiveness and risks?), there are indications that effectiveness of audit work can be improved because, according to those Finnish auditors who had practical experience in KAM reporting, there are more operational changes and improvements in internal controls perceived to occur under KAM reporting (see descriptive analysis in Table 2). However, KAM were not selected based on the audit risk but rather on management views (Table 2). Further, Finnish auditors were generally skeptical of that more relevant information is revealed for the users of financial statements or that auditor liabilities would be easier to control because of KAM (see Table 1).

Further, the second phase of our PCFA analysis suggest that auditors who perceive KAM being associated with improvements in efficiency are also likely to regard it as effective and useful. Thus, our findings contribute to earlier research because the slight positive view on effectiveness is, to some degree, inconsistent with Segal (2019) who reports that audit experts regard KAM reporting as a failure. However, Segal focused on transparency, which was not the focus of our study. Furthermore, auditors who perceive KAM reporting improving audit quality are less likely to see it increasing the auditor's workload. However, auditor attributes exhibit limited predictive power

concerning views on KAM reporting as only female auditors and JHT certified auditors predict attitude towards seeing KAM work as effectiveness-centered matter.

A PCFA investigation into the answer patterns of respondents who had experience in KAM reporting yielded three factors concerning the KAM processes. These were *Effectiveness*, *Risks*, and *Workload*. These factors may also portray views on the current audit work, in which auditors have to balance between effectiveness, audit risks and keeping their workload at a tolerable level. However, the workload factor was not very strong. This suggests that Finnish auditors do not typically base their considerations on KAM on workload.

We also suggest that operational improvements mentioned in Table 2 conceptually signal improved audit effectiveness (even if we did not study for example accruals or re-statements, see e.g. Knechel and Sharma, 2012). Our responses however indicate that KAM are currently selected, in part at least, based on management's views, which may signal improved cooperation but also weak auditor independence. Further, KAM are sometimes selected only at the end of the audit process, suggesting superficial legitimacy considerations immediately after audit standard changes (cf. Holm and Zaman, 2012).

In conclusion, the title of this paper asked “Do key audit matters matter?” We asked the professional auditors themselves and, based on our findings, key audit matters do matter to some extent because KAM-related efficiency appears to be positively correlated with the effectiveness of KAM. However, KAM do not matter much to audit quality and they are not necessarily selected based on audit risks. Further, KAM are not always perceived as adding value to the users of audit reports (see also e.g. Vanstraelen et al., 2012).

5.2 Practical implications, limitations and future research

The findings of this paper suggest that KAM reporting may bring efficiency and effectiveness to auditing and focus the work of young audit professionals (see Table 6). As a practical implication, by focusing the audit work with KAM reporting, and thereby encouraging operational improvements in internal controls, the auditor may balance some of audit risks and workload issues. Further, by noting the possible risks in selecting KAM, such as putting too much weight on

managerial views, auditors may manage audit expectations and work processes, thereby maintaining audit quality and independence. Overall, auditors had a negative view of the standard-setting changes made (cf. Holm and Zaman, 2012), and such perceptions may be similar in other European countries as well.

This study has some limitations, which may affect the generalizability of the results. First, we used a relatively short and new survey instrument to maximize the response rate. This can be an additional contribution but, for this reason, our survey instrument may overlook some aspects related to KAM reporting, which professional public auditors regard important but on which they could not express their views. Second, the survey was collected from a single country. While we contacted the majority of public auditors in Finland, the respondents may not form a random sample of the global auditor population, which may bias our findings. However, we think that our findings are largely generalizable to countries where KAM or CAM are applied.

As directions of future research, we suggest carrying out a similar study in other institutional settings. Furthermore, additional insights into auditor's views of KAM or CAM reporting could be gleaned by interviews. Further, additional studies on managerial influences in auditing and about what is perceived as relevant or effective by practitioners, are called for. Future studies could also address the conflicting pressures in audit work considering for example balancing the workload, audit quality and risks during the emerging era of automation in analytics.

References

Audit Act (Finnish Audit Act, Law 1141/2015).

Abdullatif, M. and Al-Rahahleh, A.S. (2020), 'Applying a new audit regulation: Reporting Key Audit Matters in Jordan', *International Journal of Auditing*, Vol. 24, pp. 268–291.

Bédard, J., Gonthier-Besacier, N. and Schatt, A. (2019), 'Consequences of Expanded Audit Reports: Evidence from the Justifications of Assessments in France', *Auditing: A Journal of Practice & Theory*, Vol. 38 No. 3, pp. 23-45.

Brasel, K., Doxey, M.M., Grenier, J.H. and Reffet, A. (2016), 'Risk Disclosure Preceding Negative Outcomes: The Effects of Reporting Critical Audit Matters on Judgments of Auditor Liability', *The Accounting Review*, Vol. 91 No. 5, pp. 1345-1362.

Bookey, P.K. and Quick, R. (2016), 'Bank Directors' Perceptions of Expanded Auditor's Reports', *International Journal of Auditing*, Vol. 20, pp. 158-174.

Bowlin, K. (2011), 'Risk-based auditing, strategic prompts, and auditor sensitivity to the strategic risk of fraud', *The Accounting Review*, 86(4), 1231-1253.

Burke, J., Hoitash, R., Hoitash, U. and Xiao, S. (2020), 'An Investigation of U.S. Critical Audit Matters Disclosures', <http://dx.doi.org/10.2139/ssrn.3635477>

Chand, P. and White, M. (2006). 'The Influence of Culture on Judgments of Accountants in Fiji', *Australian Accounting Review*, Vol. 16 No. 3, pp. 82-88.

Christensen, B.E., Glover, S.M. and Wolfe, C.J. (2014), 'Do Critical Audit Matter Paragraphs in the Audit Report Change Nonprofessional Investors' Decision to Invest? ', *Auditing: A Journal of Practice and Theory*, Vol 33, No. 4, pp. 71-93.

Cody, K.A. (2018), 'Critical Audit Matters: Improving Disclosure Through Auditor Insight', *UC Davis Business Law Journal*, Vol. 18, pp. 259-290.

Cordos, G.-S. and Fulöp, M.-T. (2015), 'Understanding audit reporting changes: introduction of Key Audit Matters', *Accounting and Management Information Systems*, Vol. 14 No. 1, pp. 128-152.

Eshleman, J. and Guo, P. (2014), 'Do Big 4 Auditors Provide Higher Audit Quality after Controlling for the Endogenous Choice of Auditor? ', *Auditing: A Journal of Practice and Theory*, Vol. 33 No. 4, pp. 197-19.

EU directive (Directive 2014/56/EU).

Francis, J. R. (2004), 'What do we know about audit quality?', *The British Accounting Review*, Vol. 36 No. 4, pp. 345-368.

Gimbar, C., Hansen, B. and Ozlanski, M.E. (2016), 'The Effects of Critical Audit Matter Paragraphs and Accounting Standard Precision on Auditor Liability', *The Accounting Review*, Vol. 91 No. 6, pp. 1629-1646.

Gold, A., Gronewold, U. and Pott, C. (2012), 'The ISA 700 auditor's report and the audit expectation gap – Do explanations matter?', *International Journal of Auditing*, Vol. 16 No. 3, pp. 286-307.

Gold, A. & Heilmann, M. (2019), 'The consequences of disclosing key audit matters (KAMs): A review of the academic literature', *Maandblad voor Accountancy en Bedrijfseconomie*, Vol. 93 No. (1/2), 5-14.

Gold, A., Heilmann, M., Pott, C. and Rematzki, J. (2020), 'Do key audit matters impact financial reporting behavior?', *International Journal of Auditing*, DOI: 10.1111/ijau.12190

Gullkvist, B., and Jokipii, A. (2013), 'Perceived importance of red flags across fraud types', *Critical Perspectives on Accounting*, Vol. 24 No. 1, pp. 44-61.

Gutierrez, E., Minutti-Meza, M., Tatum, K.W. and Vulcheva, M. (2018), 'Consequences of adopting an expanded auditor's report in the United Kingdom', *Review of Accounting Studies*, Vol. 23, pp. 1543-1587.

Holm, C. and Zaman, M. (2012), 'Regulating audit quality: Restoring trust and legitimacy', *Accounting Forum*, Vol. 36, No. 1, pp. 51-61.

Hope, O.-K., Langli, J.C., and Thomas, W.B. (2012), 'Agency conflicts and auditing in private firms', *Accounting, Organizations and Society*, Vol. 37, pp. 500-517.

IAASB (2017), 'The New Auditor's Report. A comparison between the IAASB and the US PCAOB standards', Available at: <https://www.ifac.org/system/files/publications/files/Auditor-Reporting-Summary-Comparison-between-IAASB-Standards-and-PCAOB-Standard-Table-Form.pdf>.

International Auditing and Assurance Board, IAASB (2014), 'A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality', International Auditing and Assurance Standards Board, IAASB (2015), 'Auditor Reporting – Key Audit Matters', January 30, 2015.

Ittonen, K. Vähämaa, E. and Vähämaa, S. (2013), 'Female Auditors and Accruals Quality', *Accounting Horizons*, Vol. 27 No. 2, pp. 205-28.

ISA 701. 'International Accounting Standard about Key Audit Matters', Available at: https://www.ifac.org/system/files/publications/files/ISA-701_2.pdf

Jermakowicz, E.K., Epstein, B.J. and Ramamoorti, S. (2018), 'CAM versus KAM – A Distinction without a Difference? Making Judgments in Reporting Critical Audit Matters', *The CPA Journal*, February 2018, pp. 34-40.

Joshi, P.L., Bremser, W.G. and Al-Ajmi, J. (2008), 'Perceptions of accounting professionals in the adoption and implementation of a single set of global accounting standards: Evidence from Bahrain', *Advances in Accounting, incorporating Advances in International Accounting*, Vol. 24, pp. 41-48.

Kachelmeier, S.J., Rimkus, D., Schmidt, J.J. and Valentine, K. (2019), 'The Forewarning Effect of Critical Audit Matter Disclosures Involving Measurement Uncertainty', *Contemporary Accounting Research*, doi:10.1111/1911-3846.12583

Kend, M. and Nguyen, L.A. (2020), 'Investigating recent audit reform in the Australian context: An analysis of the KAM disclosures in audit reports 2017–2018', *International Journal of Auditing*, DOI: 10.1111/ijau.12205.

Kitiwong, W. and Sarapaivanich, N. (2020), 'Consequences of the implementation of expanded audit reports with key audit matters (KAMs) on audit quality', *Managerial Auditing Journal*, Vol. 36 No 8, pp. 1095-1119.

Knechel, W.R., Krishnan, G.V., Pevzner, M., Shefchik, L.B. and Velury, U.K. (2013), 'Audit Quality: Insights from the Academic Literature', *Auditing: A Journal of Practice and Theory*, Vol. 32 No. 1, pp. 385-421.

Knechel, W. R. and Sharma, D. S. (2012), 'Auditor-provided nonaudit services and audit effectiveness and efficiency: Evidence from pre-and post-SOX audit report lags', *Auditing: A Journal of Practice & Theory*, 31(4), 85-114.

Kumarasiri, J. and Fisher, R. (2011), 'Auditors' perceptions of fair-value accounting: developing country evidence', *International Journal of Auditing*, Vol. 15, pp. 66-87.

Köhler, A., Ratzinger-Sakel, N. and Theis, J. (2020), 'The Effects of Key Audit Matters on the Auditor's Report's Communicative Value: Experimental Evidence from Investment Professionals and Non-professional Investors', *Accounting in Europe*, Vol. 17 No. 2, pp. 105-128.

Li, H., Hay, D. and Lau, D. (2019), 'Assessing the impact of the new auditor's report', *Pacific Accounting Review*, Vol. 31 No 1, pp. 110-132.

Libby, R. (1979), 'Bankers' and Auditors' Perceptions of the Message Communicated by the Audit Report', *Journal of Accounting Research*, Vol. 17 No. 1, pp. 99-122.

Mock, T., Bédard, J., Coram, P., Davis, S., Espahbodi, R. and Warne, R. (2013), 'The Audit Reporting Model: Current Research Synthesis and Implications', *Auditing: A Journal of Practice and Theory*, Vol. 32 No. 1, pp. 323-351.

Mooi, E., Sarsted, M. and Mooi-Reci, I. (2018), *Market Research. The Process, Data, and Methods Using Stata*. Springer Texts in Business and Economics: Singapore.

Moroney, R., Phang, S.-Y. and Xiao, X. (2020), 'When Do Investors Value Key Audit Matters?', *European Accounting Review*, DOI: 10.1080/09638180.2020.1733040.

Niemi, L. and Sundgren, S. (2008), 'Developments in auditing regulation in Finland: from a national to international framework', in Quick, R., Turley, S. and Willekens, M. (Eds.), *Auditing Trust and Governance. Regulation in Europe*, Oxon: Routledge, pp. 78-97.

Niskanen, J., Karjalainen, J., Niskanen, M. and Karjalainen, J. (2011), 'Auditor gender and corporate earnings management behavior in private Finnish firms', *Managerial Auditing Journal*, Vol. 26 No. 9, pp. 778-793.

Pratoomsuwan, T. and Yolrabil, O. (2020), 'Key audit matter and auditor liability: evidence from auditor evaluators in Thailand', *Journal of Applied Accounting Research*, DOI 10.1108/JAAR-10-2019-0147.

Ojala, H., Niskanen, M., Collis, J., and Pajunen, K. (2014), 'Audit quality and decision-making in small companies', *Managerial Auditing Journal*, Vol. 29 No. 9, pp. 800-817.

Pajunen, K., and Saastamoinen, J. (2013), 'Do auditors perceive that there exists earnings management in goodwill accounting under IFRS? Finnish evidence', *Managerial Auditing Journal*, Vol. 28 No. 3, pp. 245-260.

Pincus, K. V., Bernardi, R. and Ludwig, S. (1999), 'Audit effectiveness versus audit efficiency: Are the two in conflict?', *International Journal of Auditing*, Vol. 3 No. 2, pp. 121-133.

Public Company Accounting Oversight Board (PCAOB) (2013), 'Proposed Auditing Standards-The Auditor's Report on an Audit of Financial Statements when the Auditor Expresses an Unqualified Opinion; The Auditor's Responsibilities Regarding Other Information in Certain Documents Containing Audited Financial Statements and the Related Auditor's Report; and Related Amendments to PCAOB Standards', PCAOB Release No. 2013-005. Washington, DC.

Public Company Accounting Oversight Board (PCAOB) (2017), 'The Auditor's Report on an Audit of Financial Statements when the Auditor Expresses an Unqualified Opinion and Related Amendments to PCAOB Standards', PCAOB Release No. 2017-001.

Porter, B. (1993), 'An empirical study of the audit expectation-performance gap', *Accounting and Business Research*, Vol. 24 No. 93, pp. 49-68.

Reid, L.C., Carcello, J.V., Li, C. and Neal, T.L. (2019), 'Impact of Auditor Report Changes on Financial Reporting Quality and Audit Costs: Evidence from the United Kingdom', *Contemporary Accounting Review*, Vol. 36 No. 3, pp. 1501-1539.

Saastamoinen, J., Djatej, A., Pajunen, K. and Gorton, M.D. (2020), 'Practitioner views of goodwill accounting under US GAAP', *Journal of Applied Accounting Research*, DOI 10.1108/JAAR-04-2019-0074

Segal, M. (2019), 'Key audit matters: insight from audit experts', *Meditari Accountancy Research*, Vol. 27 No. 3, pp. 472-494.

Sierra-García, L., Gambetta, N., García-Benau, M.A. and Orta-Pérez, M. (2019), 'Understanding the determinants of the magnitude of entity-level risk and account-level risk key audit matters: The case of the United Kingdom', *The British Accounting Review*, Vol. 51, pp. 227-240.

Sirois, L.-P., Bédard, J. and Bera, P. (2018), 'The Informational Value of Key Audit Matters in the Auditor's Report: Evidence from an Eye-Tracking Study', *Accounting Horizons*, Vol. 32 No. 2, pp. 141-162.

Sundgren, S. (1998), 'Auditor choices and auditor reporting practices: evidence from Finnish small firms', *European Accounting Review*, Vol. 7 No. 3, pp. 441-465.

Vanstraelen, A., Schelleman, C., Meuwissen, R. and Hofmann, I. (2012), 'The audit reporting debate: seemingly intractable problems and feasible solutions', *European Accounting Review*, Vol. 21 No. 2, pp. 193-215.

Vinson, J.M., Robertson, J.C. and Cockrell, R.C. (2019), 'The Effects of Critical Audit Matter Removal and Duration on Jurors' Assessments of Auditor Negligence', *Auditing: A Journal of Practice & Theory*, Vol. 38 No. 3, pp. 183-202.

Watkins, A.L., Hillison, W. and Morecroft, S.E. (2004), "Audit Quality: A Synthesis of Theory and Empirical Evidence", *Journal of Accounting Literature*, Vol. 23, pp. 15-193.

TABLES

Table 1. Descriptive statistics of general statements.

Statement (and key references for it)	N	Mean	S.D.	Min.	Max.	t-value
1. KAM reporting improves audit quality (a key variable, see DeAngelo, 1980; Watkins et al., 2004; recently also Li et al., 2019; Reid et al., 2019)	273	2.377	0.963	1	5	-10.69***
KAM reporting helps controlling the auditor's liability (Pratoomsuwan et al., 2020).	271	2.804	1.038	1	5	-3.10***
3. KAM reporting improves the communication among auditors and management (Segal, 2019).	269	2.346	0.956	1	5	-11.23***
4. KAM reporting improves audit efficiency with a smooth audit process (Ashbar and Ruhnke, 2019).	269	3.182	0.977	1	5	3.06***
5. KAM reporting does not increase general trust in auditing (Holm and Zaman, 2012; see also Segal, 2019).	266	3.376	1.010	1	5	6.07***
6. KAM reporting does not provide relevant information to financial statement users (Vanstraelen et al., 2012; see also Köhler et al., 2020).	267	3.464	0.970	1	5	7.82***
7. KAM reporting improves trust in true and fair view being given in company financial statements (Holm and Zaman, 2012; Vanstraelen et al., 2012).	264	2.398	0.896	1	5	-10.92***
8. KAM reporting increases general trust in auditing (see e.g. Holm and Zaman, 2012; Segal, 2019).	267	2.393	0.866	1	5	-11.44***
9. KAM reporting provides investors with value-adding information (Christensen et al., 2014; see also Abdullatif & Al-Rahaahleh, 2020; Köhler et al., 2020).	268	2.325	0.905	1	5	-12.21***
10. KAM reporting provides managers with value-adding information (user view, e.g. Vanstraelen et al., 2012; for a recent discussion see Segal, 2019).	268	2.743	0.989	1	5	-4.26***
11. KAM reporting is a good thing (general perception or opinion, for recent discussions in audit field see Reid et al., 2019; Gold et al., 2020).	270	2.330	0.967	1	5	-11.39***
12. KAM reporting improves audit report quality (BooLaky & Quick, 2016).	264	2.545	0.997	1	5	-7.41***
13. KAM reporting reduces the audit expectations gap (Ashbar & Ruenke, 2019).	266	2.628	0.911	1	5	-6.66***
14. KAM reporting increases the transparency of an audit report (Segal, 2019; Gold et al., 2020).	264	2.292	0.890	1	5	-12.92***

Notes: Likert scale: 1 (disagree) – 5 (agree), N=the number of observations, S.D.=standard deviation. t-value measures whether the mean value is statistically different from the neutral value of 3. Statistical significance: *** p-value < 0.01.

Table 2. Descriptive statistics of the KAM reporting process.

Statement (and key references for it)	N	Mean	S.D.	Min.	Max.	t-value
1. KAM reporting increases the workload too much in the audit process. (workload as a threat to quality, e.g. Lopez and Peters, 2012)	109	2.550	0.948	1	5	-4.95***
2. KAM are easy to select. (focus and risks, e.g. Bowlin, 2011)	108	2.500	0.912	1	5	-5.70***
3. Audit process is easier to focus when you first decide the KAM. (focus and risks, e.g. Bowlin, 2011)	109	2.670	1.028	1	5	-3.35***
4. KAM reporting has led to more operational improvements in my client companies than during the earlier reporting style. (effectiveness topic, see e.g. Knechel and Sharma, 2012)	108	3.278	0.926	1	5	3.12***
5. KAM reporting facilitates finding more internal control inefficiencies than before. (audit effectiveness topic, see e.g. Knechel and Sharma, 2012)	107	3.486	0.994	1	5	5.06***
6. I select the KAM based on audit risk (focus and risks, e.g. Bowlin, 2011, recently also Segal, 2019).	104	2.019	0.892	1	5	-11.21***
7. I select the KAM based on management wishes and views (Auditor independence view, see e.g. Knechel and Sharma, 2012, and recently also Ashbar & Ruenke, 2019).	109	4.119	0.988	1	5	11.83***
8. I select the KAM only at the end of audit process. (focus and risks, e.g. Bowlin, 2011)	108	3.981	1.032	1	5	9.88***
Notes: Likert scale: 1 (disagree) – 5 (agree), N=the number of observations, S.D.=standard deviation. t-value measures whether the mean is statistically different from the neutral value of 3. Statistical significance: *** = p-value < 0.01.						

Table 3. Descriptive statistics of the respondents.

Variable	Description	N	Mean	S.D.	Min.	Max.
<i>Age</i>	Age in years.	279	53.24	13.44	28	79
<i>Experience</i>	Experience in years.	281	21.82	11.33	0	50
<i>Big4</i>	Equals 1 if a respondent works for a Big 4 firm and 0 otherwise.	278	0.30	0.46	0	1
<i>HT</i>	Equals 1 if a respondent holds HT as the highest public auditor's certification and 0 otherwise.	283	0.43	0.50	0	1
<i>JHT</i>	Equals 1 if a respondent holds JHT as the highest public auditor's certification and 0 otherwise.	283	0.10	0.30	0	1
<i>KHT</i>	Equals 1 if a respondent holds KHT as the highest public auditor's certification and 0 otherwise.	283	0.50	0.50	0	1
<i>FEMALE</i>	Equals 1 if a respondent is female and 0 otherwise.	281	0.29	0.46	0	1
<i>KAM Experience</i>	Equals 1 if a respondent reports having KAM experience and 0 otherwise.	277	0.27	0.45	0	1
Notes: N=the number of observations, S.D.=standard deviation, Min.= minimum, Max.= maximum.						

Table 4. Factor solution of KAM reporting.

Statement	Quality	Efficiency
<i>KAM reporting improves audit quality.</i>	0.562	
<i>KAM reporting helps controlling the auditor's liability.</i>		0.767
<i>KAM reporting improves audit efficiency with a smooth audit process.</i>		0.979
<i>KAM reporting does not increase general trust in auditing.^R</i>	0.894	
<i>KAM reporting does not provide relevant information to financial statement users.^R</i>	0.893	
<i>KAM reporting improves trust in true and fair view being given in company financial statements.</i>	0.618	
<i>KAM reporting increases general trust in auditing.</i>	0.748	
<i>KAM reporting provides managers with value-adding information.</i>		0.696
<i>KAM reporting is a good thing.</i>	0.739	
<i>KAM reporting improves audit report quality</i>	0.668	
<i>KAM reporting increases the transparency of an audit report.</i>	0.775	
Cronbach's alpha	0.923	0.796
Lambda	6.302	1.206
Variance explained	0.525	0.391
Notes: KMO = 0.919, $\kappa^2 = 1710.521$ ($p < 0,001$). ^R Scale reversed.		

Table 5. Factor solution of the KAM process.

Statement	Effectiveness	Risks	Workload
<i>KAM reporting increases the workload too much in the audit process.</i>			0.911
<i>KAM are easy to select</i>		0.599	
<i>Audit process is easier to focus when you first decide the KAM.</i>	0.683		
<i>KAM reporting has led to more operational improvements in my client companies than during the earlier reporting style.</i>	0.851		
<i>KAM reporting facilitates finding more internal control inefficiencies than before..</i>	0.834		
<i>I select the KAM based on audit risk.</i>		0.808	
<i>I select the KAM based on management wishes and views.</i>	0.638		
<i>I select the KAM only at the end of audit process.^R</i>		0.568	
Cronbach's alfa	0.748	0.467	-
Lambda	2.382	1.633	1.146
Variance explained	0.298	0.204	0.143
Notes: KMO = 0.654, $\kappa^2 = 150.071$ ($p < 0.001$). ^R Scale reversed.			

Table 6. OLS regressions of the predictors of Quality and Efficiency.

Dependent variable	<i>Quality</i>		<i>Efficiency</i>	
	Coefficient	t-value	Coefficient	t-value
<i>Age</i>	0.006	1.09	-0.017	-2.97***
<i>Experience</i>	-0.010	-1.58	-0.002	-0.37
<i>KHT</i>	0.212	-1.56	0.342	1.87*
<i>JHT</i>	0.253	1.07	0.068	0.36
<i>Female</i>	-0.044	-0.32	-0.009	-0.06
<i>Big4</i>	-0.342	-1.56	-0.055	-0.26
Constant	-0.143	-0.38	0.779	2.16**
F-statistic	2.01*		4.74***	
R ²	0.053		0.097	
N	228		228	

Notes: N=The number of observations. Statistical significance: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1.

Table 7. OLS regressions of the predictors of Effectiveness, Risks and Workload.

Dependent variable	<i>Effectiveness</i>		<i>Risks</i>		<i>Workload</i>	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
<i>Quality</i>	-0.132	-1.38	0.129	0.93	-0.445	-3.14***
<i>Efficiency</i>	0.609	7.35***	-0.051	-0.42	0.341	0.728
<i>Age</i>	-0.006	-0.78	0.020	1.71*	-0.178	-1.49
<i>Experience</i>	0.000	0.07	-0.015	-1.58	0.010	1.03
<i>KHT</i>	0.077	0.35	-0.340	-1.07	0.249	0.76
<i>JHT</i>	0.626	2.06**	-0.132	-0.30	0.440	0.98
<i>Female</i>	-0.499	-2.95***	-0.446	-1.83*	-0.233	-0.93
<i>Big4</i>	0.143	0.60	-0.195	-0.57	-0.248	-0.70
Constant	0.268	0.55	-0.141	-0.20	0.631	0.88
F-statistic	12.28***		3.28***		2.46**	
R ²	0.521		0.187		0.123	
N	84		84		84	

Notes: N=The number of observations. Statistical significance: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1.