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Informativeness of Key Audit Matter (KAM) Disclosures

- An exploratory study of ISA 701 in Sweden

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Abstract

In this study, we examine whether Key Audit Matter (KAM) disclosures are informative in the Swedish setting. Financial stakeholders have long criticized the audit report for being too standardized and neither conveying entity-specific nor relevant information. Stakeholders have pointed out that information, with respect to complex issues, such as accounting estimates associated with estimation uncertainty and management judgment should be communicated by auditors. In response, the International Auditing and Assurance Standards Board (IAASB) in 2015 issued several changes to the audit report. At heart of these changes is the inclusion of KAM, that is supposed to convey information about entity-specific risks, to improve the informativeness of the audit report. By using textual analysis, we (i) measure tone to capture the sentiment and specificity of KAM disclosures and (ii) use a binary index to quantify the specificity level of KAM disclosures. We explore potential determinants that drive variations in the tone and specificity of KAM disclosures in the audit report which in turn yield an indication of whether KAM disclosures are informative. We document that determinants associated with audit firm characteristics and firm financial characteristics drive variations in the tone and specificity of KAM disclosures. Other determinants associated with estimation uncertainty constituting underlying economics such as Total accruals, Number of segments and Industry are not reflected in KAM disclosures. Further, we find that the KAM disclosures do not hold a high level of specificity. Together, these findings suggest that KAM disclosures are limited informative as they do not reflect estimation uncertainty and are only entity-specific to a lesser extent.

Keywords: ISA 701 • Key Audit Matters • KAM disclosures • Audit report • Specificity • Tone • Risk-factor disclosures

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1. Introduction

Managers, investors, and regulators highly underestimated the risk that financial institutions took on ahead of the financial crisis in 2007-2009. In the wake of the crisis, demands for improved risk reporting became more intense (Singleton-Green & Hodgkinson 2011). As a part of this, many financial stakeholders called for more informative and relevant audit reports containing entity-specific information (IAASB 2015a; IAASB 2015b). Together with this, prior audit research, correspondingly, conclude that the standardized format of the audit report is neither informative nor useful to financial stakeholders (e.g., Humphrey, Loft & Woods 2009; Turner, Mock, Coram & Gray 2010; Vanstraelen, Schelleman, Meuwissen & Hofmann 2012). In response to these signals, the International Auditing and Assurance Standards Board (IAASB) in 2015 issued several changes to the audit report. At the heart of these changes is the inclusion of the new section Key Audit Matters (KAM), wherein the auditor will communicate "those matters that, in the auditor's judgment were of most significance in the audit of the current-period financial statements" (IAASB 2015a p.4). The former Technical Director of IAASB, James Gunn, notes that the intended outcome of including KAM is "more informative audit reports, with the information about the audit of the financial statements that are unique and more specific to the entity that has been audited" (IAASB 2013a). The IAASB underline that financial stakeholders particularly have sought for more information with regards to accounting estimates associated with management judgment and high estimation uncertainty (ISA 701). Thus, when determining KAM, the auditor shall take into account "significant auditor judgments relating to areas in the financial statements that involved significant management judgment, including accounting estimates that have been identified as having high estimation uncertainty" (ISA 701 Para. A23–A24). The finalized standard that refers to KAM disclosures is ISA 701, which is mandatory for listed entities and effective for audits of financial statements for periods ending on or after December 15, 2016 (IAASB 2015a; 2015b).

What is evident from the preceding is that financial stakeholders crave more informative audit reports. The IAASB's suggested solution to improve the informativeness is the inclusion of KAM, wherein the auditor convey information about risks that are specific to a reporting entity. A few studies have been conducted on KAM disclosures and focused on how the new audit report affect investors' judgment in mainly experimental settings. These studies suggest a pertinent role for KAM disclosures (e.g., Brasel, Doxey, Grenier & Reffett 2016; Christensen, Glover & Wolfe 2014; Kachelmeier, Schmidt & Valentine 2017). In addition, Hope, Hu and Lu (2016) outline a critical role for risk-factor disclosures like KAM to be entity-specific as they demonstrate that financial stakeholders find specific risk disclosures made by management valuable and informative. These findings suggest that if KAM disclosures are entity-specific, they are informative. Notwithstanding, it remains empirically unknown whether KAM disclosures are entity-specific since prior research conducted on KAM disclosures is mainly experimental. Accordingly, it is of interest to empirically establish whether KAM disclosures are entity-specific and thus informative.

This study sets out to empirically examine whether KAM disclosures are informative, as the IAASB claim that entity-specific KAM disclosures will induce informative disclosures. It is necessary here to clarify what is meant by informative KAM disclosures. We will refer to informative KAM disclosures in line with IAASB (2015a), which claims that auditor communication is informative to users when it is entity-specific. Further, we will also consider KAM disclosures as informative when estimation uncertainty is reflected in KAM. As reported above, this is motivated from the fact that IAASB highlight that financial stakeholders have sought for more information with regards to estimation uncertainty. In line with this, auditors should disclose such information. Accordingly, if KAM disclosures reflect estimation uncertainty we assume in this study that they are informative. In order to examine KAM disclosures, our study includes a sample that comprise of non-financial firms listed on the Swedish Stock Exchange, Nasdaq Stockholm. It is favorable to conduct our

study in the Swedish setting. This due to the fact that Sweden has adopted the EU regulation 537/2014 on specific requirements regarding statutory audit as a whole and Swedish auditors are required by law to follow IAASB's standards on auditing (Proposition 2015/16:162; Revisorslag SFS 2001:863). Consequently, our results will reflect how ISA 701 works in practice and in line with the intentions of the EU and IAASB and will not be distorted from any domestic amendments.

To examine whether KAM disclosures are informative we proxy informativeness through specificity and tone. To do so, we measure the disclosures in two ways: (i) measure tone to capture the sentiment and specificity of KAM disclosures and (ii) use a binary index to quantify the specificity level (based on a distinction between firms that provide entity-specific KAM disclosures and those that do not). The tone is a measure to capture either the "affect" or "feeling" of communication and we will refer to this meaning of tone (Henry 2008). As such, risk-factor disclosures like KAM disclosures are about conveying information regarding firm-specific risks, e.g., potential negative outcomes, areas associated with high estimation uncertainty and management judgment. Thus, KAM disclosures will have an uncertain and negative tone per se. Firstly, to capture this intrinsic uncertainty and negative tone of KAM, we employ one Uncertainty- and one Negative wordlist from Loughran and McDonald (2011), which have been used in prior finance and accounting research (e.g., Davis, Ge, Matsumoto & Zhang 2015). We use this aspect of tone as a first step to capture informativeness. Secondly, to capture whether the text is entity-specific and thus informative, we use those dictionaries from the computer-aided text-analysis program DICTION that capture specificity. Lastly, to fine-tune our examination of how informative KAM disclosures are, we manually construct an index to quantify the specificity of KAM disclosures. If ISA 701 works as intended, KAM disclosures should be specific to a reporting entity and reflect estimation uncertainty, constituting firms' underlying economics, such as Total accruals, Number of segments and Industry. Yet, KAM disclosure should not be significantly associated with other determinants such as audit firm characteristics captured through audit firm and audit fee and firm financial characteristics captured through Firm size, Leverage and Return on assets (ROA). As there is no strong theory pertaining to the audit field and it has not been established what drives auditors to report in a certain way (Healy & Palepu 2001), theories will partly be borrowed from the voluntary disclosure literature. It is deemed to be possible since prior mandatory disclosure literature demonstrates that voluntary disclosure literature is applicable (Peters & Romi 2013). In line with the abovementioned we make the following conjecture: Determinants associated with (i) estimation uncertainty, (ii) audit firm characteristics and (iii) firm financial characteristics explain variations in the tone and specificity of KAM disclosures.

Our results demonstrate that determinants associated with audit firm characteristics and firm financial characteristics drive variations in the tone and specificity of KAM disclosures. Other determinants associated with estimation uncertainty constituting firms' underlying economics is not reflected in KAM disclosures. For our Specificity index, we find a large spread in how specific KAM disclosures are, ranging from not specific at all to very specific. As stated in the outset, the IAASB argues that KAM disclosures should reflect estimation uncertainty and that auditor communication is informative when it is entity-specific. Having other determinants than estimation uncertainty reflected in KAM disclosures and a large spread in the specificity level of KAM disclosures suggest that ISA 701 do not work as intended and that KAM disclosures are only informative to a limited extent.

By concluding that KAM disclosures are only informative to a limited extent, this paper makes several contributions. Firstly, we examine KAM disclosures in a new way by using a unique combination of different wordlists to capture the tone and specificity of KAM disclosures and in turn apprehend their informativeness. Tone has been widely used to measure financial documents such as annual reports (Li 2008), 10-K documents (Bonsall, Leone, Miller & Rennekamp 2017;

Loughran & McDonald 2014) and analyst reports (Franco, Hope, Vyas & Zhou 2015). Notwithstanding, our paper add insights by using tone to capture the specificity of KAM disclosures and in turn their informativeness. Thus, our study makes an exploratory contribution to the relatively scarce audit literature and establish a new approach to study KAM disclosures. Secondly, we also contribute with our paper through studying a new aspect of KAM disclosures, informativeness, and demonstrate that KAM disclosures are only informative to a limited extent. We highlight factors that are expected to affect KAM disclosures and add to findings that there are other factors than estimation uncertainty constituting firms' underlying economics that drive how auditors make KAM disclosures. Accordingly, as KAM disclosures do not reflect firms' underlying economics and are only entity-specific to a lesser extent, ISA 701 do not work as intended. Lastly, from a standard-setting perspective, this paper provides empirical evidence that only partially support IAASB's call for KAM disclosures to be entity-specific. Our findings suggest that the IAASB should emphasize the importance of making entity-specific disclosures. In addition, they should also urge auditors to disclose information associated with high estimation uncertainty to improve the informativeness of KAM disclosures.

The remainder of the paper proceeds as follows. Section 2 provides a description of ISA 701 and Section 3 gives a review of the prior literature. Thereafter Section 4 follows, wherein we develop our conjectures. In Section 5, we present our research design. Next, in Section 6 we present our descriptive statistics. In Section 7 empirical results are presented, followed by a concluding discussion in Section 8.

2. Regulatory setting - ISA 701

We have chosen to focus on the disclosure requirements in ISA 701, *Communicating Key Audit Matters in the Independent Auditor's Report*, which became effective December 15, 2016. In Sweden, those matters that the auditor considered to be of most significance have previously only been disclosed at the Annual General Meeting and simply not in the audit report (Balans 2015). Users of audited financial statements have called for more information about matters of significance in the audit. According to the IAASB (2015b), these matters often relate to areas in the financial statement that involve significant management judgments and subjective estimates. The inclusion of KAM is intended to highlight the most significant matters in the performed audit "through the eyes of the auditor" (IAASB 2015b p.1). By adding KAM to the audit report, the IAASB state that it will potentially benefit investors positively as well as increase users' confidence in financial statements. They emphasize that the inclusion of KAM will reinvigorate the audit report of listed entities and make it more relevant and informative to financial statement users (IAASB 2015b). The IAASB believes that KAM among other things will:

> "Focus investors and other users on areas in the financial statements that are subject to significant management judgment and significant auditor attention, which may assist investors and other users in better understanding the entity and financial statements, and the outcome of the audit as reflected in the auditor's opinion" (IAASB 2015b p.2).

In order for the information disclosed to be informative and relevant, the IAASB underline that KAM must be specific to the audited entity and that the auditor shall avoid using generic or standardized language (IAASB 2015a; IAASB 2015b). To facilitate entity-specific, meaningful and relevant KAM disclosures, ISA 701 takes a principle-based approach to determining KAM. The intent is to let the auditor undertake judgment when it comes to the level of detail included in the disclosures and allow for flexibility to enable auditors to be entity-specific (IAASB 2013b; IAASB 2015b).

3. Prior literature

3.1 Narrative disclosures and credibility

Narrative disclosures can be considered as a constituent of the "broad set of information" available to firms' financial stakeholders (Glover 2012 p.371). These narrative disclosures are provided through the issuance of regulated financial reports and other regulated documents, viewed as a cornerstone for a working capital market. The auditor then provides financial stakeholders with an independent opinion that the firm conforms to General Accepted Accounting Principles (GAAP) and thus enhances the credibility of narrative disclosures (Healy & Palepu 2001). Whether this credibility arises from the auditor qualification or other sources has been debated. In the extensive review of capital market research by Kothari (2001), it is noted that the stock market reacts to earnings announcements. This finding suggests that investors consider accounting information to be credible (Healy & Palepu 2001). For example, McKinley, Pany and Reckner (1985) demonstrate that financial statement users find accounting information more reliable when a Big N[1] firm has audited the financial information. Furthermore, Leftwich (1983) shows that when firms apply for financing, banks require them to provide audited financial statements. This, in turn suggests, that audited financial statements are credible. This section has demonstrated that audited financial statements are considered to be credible. To provide financial stakeholders with assurance, the auditor issues an independent opinion on whether the firm complies with GAAP which takes the form of an audit report (Healy & Palepu 2001). Having established the auditor opinion as credible, we will now move on to prior research on the audit report.

3.2 Audit report

The audit report has a history of being short and strongly standardized and it has over the years received extensive criticism for being neither informative nor relevant. Standard-setters have undertaken several attempts to improve the informational value of the audit report. Prominent within prior audit research is that these attempts have implied an extension of the report (e.g., Bailey, Bylinski & Shields 1983; Chong & Pflugrath 2008; Gold, Gronewold & Pott 2012; Kelly & Mohrweis 1989). Prior research with respect to an extension demonstrates diverging results. For example, Kelly and Mohrweis (1989) demonstrate that an extension of the report clarified the purpose of the audit and shifted readers' perception of the responsibility of the audit from management to auditors. Chong and Pflugrath (2008) on the other hand find that when the information disclosed increased, users understanding of the audit report decreased. What is concluded in prior audit research is that the auditor's independent opinion adds credibility, yet due to its standardized format it solely has "symbolic value, but conveys little communicative value" (Church, Davis & McCracken 2008 p. 85). Notwithstanding, the auditor's main means of communication with financial stakeholders is the audit report (Chong & Pflugrath 2008). Prior research stresses that financial stakeholders crave more informative audit reports, which would improve if it provided more client-specific content (Gray, Turner, Coram & Mock. 2011; Mock et al. 2012). In response to these callings from financial stakeholders, the standard-setter IAASB has issued ISA 701, Key Audit Matters.

3.3 Contemporary research on KAM disclosures

Prior research on KAM disclosures is relatively scarce. Most prior studies suggest an important role for KAM disclosures. However, Bédard, Gonthier-Besacier and Schatt (2014) takes a more critical approach towards KAM disclosures. They find that Justification of Assessment (similar to KAM disclosures) neither had effect on the market reaction, audit cost or audit quality in France. Their findings demonstrate that KAM disclosures were not as informative as regulators expected.

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[1] With Big N we refer to audit firms allied to an international network with knowledge sharing.
As of 2018, Big N consist of Deloitte, EY, KPMG and PwC.

They conclude in their study that KAM disclosures mainly have a symbolic value. In addition to this archival study, there is some experimental research available on KAM. These studies focus on the section Critical Audit Matters (CAM, U.S. appellation for KAM) and its effect on management, investor decisions and jurors' perception of the auditor's responsibility and liability in a litigation process. With respect to investors, Cade and Hodge (2014) find that when auditors are obliged to include a higher level of detail in regard to accounting estimates, managers are less willing to communicate private information to auditors. Moreover, Christensen, Glover and Wolfe (2014) find that investors who receive an auditor report highlighting KAM are more likely to preclude the firm as an investment. This in comparison to investors who received a traditional auditor report or received the same KAM paragraph information from management's footnote disclosures. Their finding suggests that KAM information disclosed as a separate paragraph in the audit report is more influential on investor decisions than having KAM information disclosed only in the footnotes. Further, Sirois, Bédard and Bera (2018) find that KAM disclosures have an attention-directing role for investors. KAM provides a roadmap for financial statement users and increases their attention towards matters highlighted by auditors. Their study also demonstrates that when several KAM disclosures are included, users direct less attention to non-KAM-related disclosures. This, in turn, suggests that KAM can improve investors' information search and thus reduce users' attention given to less relevant disclosures. Turning to the role of KAM disclosures in a litigation process, Brasel et al. (2016) and Kachelmeier, Schmidt and Valentine (2017) find that KAM disclosures have a "disclaimer effect". Their findings demonstrate that auditors gain a better position in litigation processes when the audit report includes KAM. The evidence reviewed in this section, seems to suggest a pertinent role for KAM disclosures. However, what is evident is that these studies remain narrow in focus since they mainly deal with experimental settings. As such, KAM disclosures convey information about risks and since the empirical research on KAM is scarce, we now turn to prior research on mandatory risk disclosures.

3.4 Risk disclosures
From a pure firm perspective, the equivalent to KAM disclosures are risk-factor disclosures issued by the firm. In recent years, there has been a growing interest in risk-factor disclosures made by management. The focus in these studies has been on the association between risk disclosures and the market reaction (Campbell, Chen, Dhaliwal, Lu & Steele 2014; Hope, Hu & Lu 2016; Kravet & Muslu 2013; Miihkinen 2013). The results from prior research indicate that risk-factor disclosures provided by the firm are valuable to users of financial reports (Campbell et al. 2014; Kravet & Muslu 2013; Miihkinen 2013). For example, Kravet and Muslu (2013) find that when risk disclosures change, the market- and analyst reaction is positive and risk disclosures are not boilerplate. Moreover, Campbell et al. (2014) find that firms facing greater risk disclose more information. They also demonstrate that high-quality risk disclosures are more valuable to smaller firms, firms with fewer analyst followers and firms operating in industries more prone to risk. Another significant aspect of risk-factor disclosures is that investors find more specific risk-factor disclosures more valuable and informative (Hope, Hu & Lu 2016). Hope, Hu and Lu (2016) introduced a new measure to quantify specificity of risk-factor disclosures in order to measure the informativeness of firms' risk disclosures. The specificity is measured by the use of specific words that are used in the disclosures, e.g., names, locations, and numbers. The specificity is computed by the Stanford Named Entity Recognition (NER) tool. They find that there is a strong positive association between specificity and the market reaction, i.e. stronger market reaction can be seen when the disclosures have a higher level of specificity. In addition, they also find that firms with higher proprietary costs provide less specific risk-factor disclosures. The evidence presented in this section suggests that financial stakeholders find risk-factor disclosures valuable and Hope Hu and Lu (2016) outline a critical role for risk-factor disclosures to be entity-specific.

4. Development of conjectures

The prior literature demonstrates that financial stakeholders find specific risk-factor disclosures useful and IAASB postulate that KAM must be entity-specific to be informative. Thus, it is of interest to examine whether KAM disclosures are informative. As there is no strong theory related to auditors' choices of mandatory disclosures (Healy & Palepu 2001), the tests undertaken in this study are characterized by an exploratory nature. Due to the lack of theories pertaining to the audit field, theories will partly be borrowed from the field of accounting. In the forthcoming section, we make a number of conjectures based on a review of the prior literature. The conjectures will be stated in the alternative form.

4.1 Underlying economics and estimation uncertainty

Research within the audit field has boomed the past 20 years as a result of the fundamental changes to the audit profession and prior research has mainly focused on audit quality. Financial reporting quality measures have been attractive proxies to employ as audit quality is an element of financial reporting quality (DeFond & Zhang 2014). Drawing on these proxies in audit research has been motivated by the fact that it is both the manager and the auditor who produce financial statements (Antle & Nalebuff 1991; Dye 1991; Magee & Tseng 1990). Under the assumption that financial statements are a joint product of managers and auditors, we will use financial reporting quality proxies to measure one output of the audit process, KAM disclosures. More details on this will be given in the following.

When determining KAM, the auditor shall take into account "significant auditor judgments relating to areas in the financial statements that involved significant management judgment, including accounting estimates that have been identified as having high estimation uncertainty" (ISA 701 Para. A23–A24). By doing this, it may assist the intended users of financial statements in understanding the entity and areas that implied significant management judgment (ISA 701). From a firm perspective, the equivalent to KAM disclosures of IFRS reporting entities, with respect to areas that involve significant management judgment refers to IAS 1 *Presentation of Financial Statements*. IAS 1, paragraph 122 and 125 requires reporting entities to disclose those judgments made by management that have had the most significant effect on the amounts recognized in the financial statements and sources of estimation uncertainty (IAS 1). Management is required to disclose information associated with management judgment and sources of estimation uncertainty in accordance with IAS 1. Alongside this requirement, from the auditor perspective, ISA 701 paragraph 9b requires auditors to consider management judgments including accounting estimates with high estimation uncertainty when determining KAM. What is prominent from this, is the congruence between what management and auditors ought to report with respect to management judgment and estimation uncertainty. This measurement uncertainty has been referred to in extant auditing literature as complex estimates (e.g., Backof, Carpenter & Thayer 2017; Glover, Taylor & Wu 2017; Griffith, Hammersley & Kadous 2013). Notwithstanding, we will refer to estimation uncertainty, in line with prior accounting literature (Barker et al. 2013; Schipper 2007) and as ISA 701 use this definition. In the light of IAS 1, Marton and Runesson (2015) argue that this estimation uncertainty constitutes the underlying economics that the disclosure is supposed to capture. Thus, we seize the opportunity to use prior accounting literature that attempted to capture underlying economics by applying various proxies from this field. We try to capture underlying economics through estimation uncertainty by employing the proxies Total accruals, Number of segments and Industry.

Total accruals. Under the accrual basis of accounting, earnings is a summary measure of firm performance and Dechow (1994) claim that accrual-based earnings are considered to be more informative than operating cash flow. This due to realized cash flows having timing and matching problems and is considered to be a noisy measure of firm performance whereas accruals reflect

firm performance in a better way. Notwithstanding, accrual-based earnings also imply greater uncertainty than cash flows. Since (i) management have an information advantage regarding a firm's cash generating ability, accordingly they can use their discretion to manipulate accruals (Dye & Verrecchia 1995; Holthausen & Leftwich 1983; Holthausen, Larcker & Sloan 1995) and (ii) accruals require managers to undertake subjective estimations about future outcomes (Francis & Krishnan 1999). Turning to auditing, Francis and Krishnan (1999) argue that accruals increase the inherent audit risk. This because when managers account for accruals they make a lot of subjective estimates of future outcomes and these accruals cannot be objectively verified by auditors prior to occurrence. Hence, audits of high-accrual firms involve more uncertainty in comparison to low-accrual firms due to potential estimation errors. Thus, there is an elevated risk that high-accrual firms have undetected assets realization and/or that the high-level of accruals causes going concern problems. Francis and Krishnan (1999) demonstrate in their study that auditors compensate for this risk exposure by employing conservative reporting, i.e. auditors of high-accrual firms issue a modified opinion more frequently than auditors of low-accrual firms. As ISA 701 poses that KAM should reflect estimation uncertainty and accruals involve high estimation uncertainty, as such, accruals should be related to the estimation uncertainty about which KAM disclosures provide information. Hence, we find Total accruals to be a useful proxy in our study for estimation uncertainty. We expect that auditors of high-accrual firms make more uncertain and negative KAM disclosures with respect to tone. In addition, there is a possibility that auditors of high-accrual firms compensate for their increased risk-exposure by making more entity-specific KAM-disclosures to disclaim themselves. Accordingly, we also expect that auditors of high-accrual firms make more specific KAM disclosures.

Number of segments and Industry. Prior disclosure literature has used the number of segments in which a firm operates as a measure of firm complexity (Francis, Nanda & Olsson 2008). We apply the proxies Number of segments and Industry to further capture estimation uncertainty in line with Marton and Runesson (2015). They suggest that firms being involved in several segments should have some items characterized by high uncertainty. Furthermore, different industries have different types of assets, liabilities or other items prominent in the financial statements which implies different estimation uncertainties. In addition, with respect to industries, we make a distinction between High-tech and Low-tech firms. For example, Miihkinen (2013) argues that firms operating in High-tech industries are associated with more estimation uncertainty since they have more intangible assets that are inherently more risk prone. He demonstrates that risk disclosures are more useful to financial stakeholders of firms operating in High-tech industries. Accordingly, we make the assumption that estimation uncertainty will be higher for firms in High-tech industries. We expect that auditors of firms operating in several segments make more uncertain and negative disclosures. We also expect that auditors of firms with several segments have more specific disclosures as these firms are associated with more uncertainty. Furthermore, we expect that auditors of firms operating in High-tech industries are associated with more estimation uncertainty and thus will make more uncertain, negative and more specific KAM disclosures.

Based on the discussion in this section, we present the following conjecture:

Conjecture 1:
    A. Determinants associated with estimation uncertainty explain variations in the tone of KAM disclosures
    B. Determinants associated with estimation uncertainty explain variations in the specificity of KAM disclosures

4.2 Audit firm characteristics

Input-based audit quality measures such as audit firm size and audit fees have been used in prior research to capture audit quality (DeFond & Zhang 2014). Rather than capturing audit quality, we will use input-based proxies to capture determinants that drive auditors to make more or less informative KAM disclosures. Since more judgment is prominent within the audit profession, one implication for the audit outcome is that it potentially could be impacted by audit firm characteristics in terms of knowledge and incentives (Knechel 2000; Knechel, Vanstraelen & Zerni 2015). The following factors may drive auditor disclosure incentives.

Internal audit firm guidelines. There is a vast amount of audit research that has focused on whether larger audit firms provide higher audit quality, captured by Big N membership (DeFond & Zhang 2014). For instance, DeAngelo (1981) claims that larger audit firms have stronger incentives and more competencies to supply high audit quality and thus Big N membership has been used as a proxy for audit quality (DeFond & Zhang 2014). If we turn to the mandatory disclosure literature, Big N audit firms have been found to influence firms' compliance with IAS 1 (the equivalent of ISA 701). For example, Hodgdon and Hughes (2016) find that the choice of audit firm impacts firms compliance with IAS 1. Their finding demonstrates that the variation in disclosures made in accordance with IAS 1 can be explained by differences in internal Big N guidance. This finding suggests that Big N auditors have different internal guidelines and thus different levels of knowledge within their network which has implications for disclosures. In line with this, we expect that depending on which audit firm that has performed the audit, the tone, and specificity of KAM disclosures will vary.

Audit fee. One stream of audit research has focused on audit fees where audit fees have been used to proxy for audit quality as they are expected to capture auditors' effort level (DeFond & Zhang 2014). For example, DeAngelo (1981) claims that the auditor-client relationship is a bilateral monopoly, i.e. if the relationship is terminated by one party, it can impose actual costs for both parties. Accordingly, the threat of ending the relationship can be favorable for both parties. The client can be favored in terms of compromised disclosures and the auditor, on the other hand, can be favored in terms of higher audit fees. She argues that auditors comprise their independence in favor of keeping clients in order to gain economic benefits. More recent studies on audit fees demonstrate that auditors price factors associated with higher risk. Gul, Chen and Tsui (2003) find a positive association between Discretionary Accruals (DA) and audit fee. DA's are difficult to audit since they involve subjective estimations and are inherently more uncertain than other items in the financial statement. Accordingly, their findings show that high DA firms are associated with more engagement risk which in turn led to more audit effort and thus higher audit fees. Further, DeFond, Lim and Zang (2016) demonstrate that auditors of more conservative firms charge lower fees since these firms impose less engagement risk. Further, Blankley, Hurtt and MacGregor (2012) examine the relation between financial statement restatement and audit fees charged in the period prior to the restatement. They find that clients associated with higher fees are less likely to be subject to restatements. This, in turn, suggests that audit fees capture audit effort (DeFond & Zhang 2014). Consequently, we expect that auditors of firms associated with higher audit fees, make more uncertain, negative and specific KAM disclosures as auditors put in more effort into these client-relationships.

We try to capture audit firm characteristics through the proxy audit firm since prior disclosure literature demonstrates that internal audit firm guidelines influence firms' compliance with IAS 1. Furthermore, we try to capture auditor-client contracting features through the proxy Audit fee.

Based on the discussion in this section, we present the following conjecture:

Conjecture 2:
   A. Determinants associated with audit firm characteristics explain variations in the tone of KAM disclosures
   B. Determinants associated with audit firm characteristics explain variations in the specificity of KAM disclosures

4.3 Firm financial characteristics

Firm financial characteristics have been widely used in prior audit research to evaluate audit quality (DeFond & Zhang 2014). Therefore, it is of interest to examine if firms' financial characteristics affect how auditors make KAM disclosures. We attempt to capture firm financial characteristics by employing the proxies Firm size, Leverage and Return on assets (ROA).

Firm size. Prior audit research demonstrates that larger clients pose greater litigation risk and that Big N auditors report more conservatively for larger clients to protect their own reputation (Reynolds & Francis 2000). This suggests that reputational risk provides the auditor with incentives to provide high-quality audits (DeFond & Zhang 2014). Thus, we measure Firm size through firm's total assets in accordance with Hope and Langli (2010). We expect that auditors of larger firms make more uncertain, negative and more specific KAM disclosures to disclaim themselves and protect their reputation.

Debt ratio. Prior audit research demonstrates that firms' debt ratio is perceived as a financial risk that affects the audit risk (Francis 1984). For example, Levitan and Knoblett (1985) argue that auditors can use financial ratios such as leverage as indicators of exception to the going concern assumption in the audit report. Accordingly, a high leverage ratio can be used by auditors to indicate higher financial risk (Craswell, Stokes & Laughton 2002). Thus, we employ the proxy Leverage to capture firms' debt ratio. We expect that auditors of firms with higher Leverage make more negative, uncertain and specific KAM disclosures to disclaim themselves from the enhanced risk exposure that more Leveraged firms involve.

Operating performance. Prior audit research suggests that firms' operating performance can be used by auditors as an indicator to identify firms associated with greater operating risk where low performing firms entail greater operating risk (Craswell, Stokes & Laughton 2002). Craswell, Stokes and Laughton (2002) put forward that firms' operating risk can impact what type of opinion auditors issue. They argue that auditors of low performing firms may feel more pressure to be independent in their judgment with respect to clients' operating performance. Linking this to KAM disclosures, we expect that auditors of firms with a lower operating performance involving greater operating risk make more uncertain, negative and specific KAM disclosures to ensure their independence. To capture firms' operating performance and in turn operating risk, we use Return on assets (ROA) in line with Hope and Langli (2010).

Based on the discussion in this section, we present the following conjecture:

Conjecture 3:
   A. Determinants associated with firm financial characteristics explain variations in the tone of KAM disclosures
   B. Determinants associated with firm financial characteristics explain variations in the specificity of KAM disclosures

5. Research design

In order to examine whether KAM disclosures are informative, we employed textual analysis. Further, with our multivariate model, we tried to predict the dependent variables tone and specificity's association with our independent variables (estimation uncertainty, audit firm characteristics and firm financial characteristics).

5.1 Sample and data collection

Our sample comprises Swedish listed entities on Nasdaq Stockholm since ISA 701 is mandatory for listed entities. It is favorable to conduct our study in the Swedish setting as Sweden adopted the EU regulation 537/2014 on specific requirements regarding statutory audit as a whole and Swedish auditors' by law are required to follow IAASB standards on auditing (Proposition 2015/16:162; Revisorslag SFS 2001:863). Consequently, our results is not distorted from any domestic amendments. Turning to prior disclosure research, it has been shown that the country effect, affects both the amount and content of corporate disclosures (e.g., Meek, Roberts & Gray 1995; Hodgdon & Hughes 2016). Accordingly, there may be several factors that influence the tone and specificity of KAM disclosures that are country specific (such as for instance legal environment and enforcement). This further justifies that it is advantageous to isolate the sample from any potential country effects.

All firms listed on Nasdaq Stockholm as of December 31, 2017, were included, initially 298 firms. In line with prior research financial firms were excluded (Marton & Runesson 2015; Miihkinen 2013), furthermore we also excluded firms with financial year ending before the effective date of ISA 701 (15th of December 2016) which generated a sample of 259 firms, see Table 1. The software program used to analyze the texts was DICTION and is only applicable to English texts. Hence, we could only include audit reports available in English and firms without were excluded. This ultimately generated our final studied sample of 188 firms. KAM disclosures were hand-collected from audit reports and in turn from annual reports of 2016. The annual reports were collected from corporate websites. The KAM disclosures were identified from the heading: *Key Audit Matter* or *Particular Important Areas* to the next heading: *Other Information than the Annual Accounts and Consolidated Accounts*. After the collection of KAM disclosures, the text was controlled for unintended changes during the collection, original misprints were left unchanged.

Table 1: Sample selection

Sample frame:	Firms
Full sample listed on Nasdaq Stockholm 2017-12-31	298
Less Financial firms (SNI/ NACE code (64 & 66)	-33
	265
Less firms with financial year ending prior to December 2016	-6
	259
Less firms without audit reports available in English	-71
Final sample	188

Note: SNI /NACE code are Swedish/ European classification, equal to SIC code for firms operating in sector 60-69

5.2 Textual analysis

We employed textual analysis in line with prior audit research (Smith 2017; Uang, Citron, Sudarsanam & Taffler 2006) to capture the tone of the text. The tone is a measure that aims to capture the "affect" or "feeling" of the communicated text (Henry 2008). The KAM disclosures were analyzed through the software program DICTION, that maps and classifies words into different categories and dictionaries, that can be statistically analyzed (Li 2010). In order to analyze

the KAM disclosures, we focused on two types of textual attributes, the tone of KAM disclosures and how specific the KAM disclosures were. We applied two complementary dictionaries, namely the Loughran and McDonald's (2011) dictionary[2] (hereafter LM) and DICTION dictionary. To capture the tone that permeates the text, we used LM (2011) which was developed to capture the tone of text in a business context (Loughran & McDonald 2016). The LM (2011) dictionary, which is continuously updated, is based on words used in 10-K reports during 1994-2008. We used two wordlists from LM (2011) to capture the tone of the text, Negative (e.g., loss, misstated, expire, discontinued, unable) and Uncertainty (e.g., ambiguity, approximate, assume, risk). As such, KAM disclosures should inform investors about accounting estimates associated with high estimation uncertainty and management judgment that have been critical during the audit. Then, to capture Specificity, we used DICTION. In comparison to the LM (2011) dictionary, DICTION was not developed with business texts in mind. Yet, DICTION has the advantage of containing 35 dictionaries (Loughran & McDonald 2016). We used those dictionaries from DICTION that capture Specificity: Spatial terms (e.g., abroad, local, country, kilometer, spacious), Temporal terms (e.g., instant, year-round, postpone, premature), Concreteness (e.g., wage, finance, European, manufacturer, store) and Numerical terms (e.g., one, hundred, multiply, percentage, subtract). From DICTION we also measured the quantity of KAM disclosures, Total words and Unique words to further capture specificity.

Let us now look at the second part of specificity. Prior research on disclosure quality has employed the Stanford NER tool to capture the specificity level of qualitative corporate disclosures (Hope, Hu & Lu; 2016; Paananen, Runesson, Samani & Dahlén 2017). Since we did not have access to the Stanford NER tool and our sample was of manageable size, we developed a binary index to manually reproduce the specificity measure that Hope, Hu and Lu (2016) introduced. We constructed the Specificity index to quantify the specificity of KAM disclosures and in turn we obtained an indication on KAM disclosures level of informativeness. The index was structured as the prevalence of disclosures of specific persons; entity names/organizations; locations; quantitative values in percentages; money values in SEK/EUR; times; and dates (See Appendix 1 for Specificity index). We modified the categories used by Hope, Hu and Lu (2016) by dividing entity names/organizations into two categories, the audited entity and other entities than the audited. Each category earned 1 point if specific information was provided at least once and 0 otherwise. The total number of points was scaled by the total number of categories (8) which yield all firms a value ranging between 0 and 1. We have identified some weaknesses with our index. Firstly, as we developed a binary index we did not measure the number of times a specific item with regards to specificity was disclosed. Consequently, we potentially obtained a somewhat distorted view of firms that disclosed specific information repeatedly in the same category. Another potential weakness was that we did not scale the index against the number of words as Hope, Hu and Lu (2016) did in their study by employing the NER tool. Thus, our specificity analysis may not be as sophisticated.

5.3 Multivariate test model
We used multiple regression analysis to test our conjectures and the association of tone and specificity related to our independent variables. Our general model is specified as follows:

$$KAM = \beta_0 + \beta_1 Total\ Accruals + \beta_2 Segments + \beta_3 Industry + \beta_4 Audit\ Fee + \beta_5 Audit\ firm + \beta_6 Size + \beta_7 Leverage + \beta_8 ROA + \varepsilon$$

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[2] Available at: https://sraf.nd.edu/textual-analysis/resources/#LM%20Sentiment%20Word%20Lists

Our dependent variable KAM was divided into two components: tone and specificity. Firstly, we tested how our independent variables could predict the tone of KAM disclosures from the LM (2011) Wordlists Negative and Uncertainty. Second, we tested the specificity of the KAM disclosures and how they could be predicted by our independent variables. The dependent variables of specificity from DICTION were Total words, Unique words, Spatial terms, Temporal terms, Concreteness and Numerical terms, lastly, we tested our Specificity index as the dependent variable. Table 2 presents all variables used in the tests. For our dummy variable Audit firm, we had the most frequently used auditor in our sample as a benchmark (PwC). Our independent variables were partly borrowed from the accounting field and the motivation behind our variables is outlined in Section 4, Development of conjectures. Most of the variables were obtained from Orbis while Audit firm and Audit fees were manually collected from the audit reports. To estimate Total accruals, we employed the Jones (1991) model and scaled Total accruals to total assets of the firm. Segments was measured as the number of separate business segments. Further, for industry, we identified High-tech industries in accordance with Francis and Schipper (1999). We also adjusted Audit fees and Total assets with the natural logarithm. In addition, we captured Leverage through measuring total liabilities to total assets and ROA through measuring earnings before taxes divided by total assets.

Table 2: Variables

Variable	Source	Description
Dependent		
Tone		
Negative	LM (2011)	Negative wordlist (e.g., loss, misstated, expire, discontinued, unable)
Uncertainty	LM (2011)	Uncertainty wordlist (e.g., ambiguity, approximate, assume, risk)
Specificity		
Total words	DICTION	Total number of words in the text
Unique words	DICTION	Total number of unique words in the text
Spatial terms	DICTION	Terms referring to geographical entities, physical distances, and modes of measurement. Included are general geographical terms (abroad, elbow-room, locale, outdoors) as well as specific ones (Ceylon, Kuwait, Poland). Also included are politically defined locations (county, fatherland, municipality, ward), points on the compass (east, southwest) and the globe (latitude, coastal, border, snowbelt), as well as terms of scale (kilometer, map, spacious), quality (vacant, out-of-the-way, disoriented) and change (pilgrimage, migrated, frontier)
Temporal terms	DICTION	Terms that fix a person, idea, or event within a specific time-interval, thereby signaling a concern for concrete and practical matters. The dictionary designates literal time (century, instant, mid-morning) as well as metaphorical designations (lingering, seniority, nowadays). Also included are calendrical terms (autumn, year-round, weekend), elliptical terms (spontaneously, postpone, transitional), and judgmental terms (premature, obsolete, punctual)
Concreteness	DICTION	A large dictionary possessing no thematic unity other than tangibility and materiality. Included are sociological units (peasants, African-Americans, Catholics), occupational groups (carpenter, manufacturer, policewoman), and political alignments (Communists, congressman, Europeans). Also incorporated are physical structures (courthouse, temple, store), forms of diversion (television, football, CD-ROM), terms of accountancy (mortgage, wages, finances), and modes of transportation (airplane, ship, bicycle). In addition, the dictionary includes body parts (stomach, eyes, lips), articles of clothing (slacks, pants, shirt), household animals (cat, insects, horse) and foodstuffs (wine, grain, sugar), and general elements of nature (oil, silk, sand)
Numerical terms	DICTION	Any sum, date, or product specifying the facts in a given case. This dictionary treats each isolated integer as a single word and each separate group of integers as a single word. In addition, the dictionary contains common numbers in lexical format (one, tenfold, hundred, zero) as well as terms indicating numerical operations (subtract, divide, multiply, percentage) and quantitative topics (digitize, tally, mathematics). The presumption is that Numerical terms hyper-specify a claim, thus detracting from its universality
Specificity index		Index with dummies if the text contains information in the categories persons, location(s), organizations, percentages, money values, times and dates. We have developed this index with inspiration from the NER tool used in Hope, Hu & Lu 2016 (See Appendix 1)
Independent variables		
Estimation uncertainty		
Total accruals	Orbis	([ΔCurrent Assets - ΔCash] - [ΔCurrent Liabilities] - Depreciation and Amortization)/Total assets, (Jones 1991), Δ change in value between 2016 and 2015
Segment	Orbis	Number of Business Segments, until one segment was repeated
Industry	Orbis	A dummy variable, 1 if SIC-code is High-tech industry in accordance with Francis & Schipper (1999)
Audit firm characteristics		
Audit Fee	Annual reports	The natural logarithm of cost of audit assignment from the main auditor. Obtained by hand-collection from annual reports
Audit Firm	Annual reports	A dummy variable indicating which audit firm that has performed the audit, manually obtained from the annual reports
Firm financial characteristics		
Size	Orbis	The natural logarithm of total assets in TSEK
Leverage	Orbis	Total liabilities divided by total assets
ROA	Orbis	Return on assets calculated as Profit and Loss before tax divided by total assets

Note: The description of DICTION variables comes from DICTION Help manual by Hart & Carroll (2014).

6. Descriptive statistics

Table 3 provides an overview of our descriptive statistics for all variables. The mean (median) of the samples KAM disclosures are 800 (781) words long and 335 (330) unique words. There is a large spread in the use of words. HiQ International had the least amount of words, with KAM disclosures amounting to 201 words and most words had Securitas with KAM disclosures amounting to 2174 words. From LM (2011) wordlists, we find that KAM disclosures are more Uncertain 8,55 (8,24) than Negative 7,63 (6,73). With respect to specificity, our DICTION variables show that KAM disclosures have a higher mean for Concreteness and Numerical terms and lower mean for Temporal terms and Spatial terms. Notable is that the minimum value for all dependent variables besides Total words, Unique words and Concreteness is zero, i.e. there are firms in the sample with disclosures that according to our dependent variables are not specific at all. Moreover, the Number of segments are on average 3,68 (3,00) units, Leverage of the sample is 29% (27%) and ROA is 7% (7%). From Table 3 Panel B we can observe that PwC is the most frequently employed auditor and audits 38%. Lastly, 23% of the firms in our sample are firms operating in High-tech industries.

Table 3: Descriptive statistics

Panel A: Descriptive statistics

Variables	Mean	Median	S. D.	Minimum	Maximum
Negative	7,63	6,73	4,50	0,00	23,88
Uncertainty	8,55	8,24	4,11	0,00	21,65
Total words	800,27	781,50	338,94	201,00	2174,00
Unique words	335,18	330,00	145,08	90,00	916,00
Spatial terms	3,49	3,00	2,66	0,00	15,11
Temporal terms	8,37	7,16	10,11	0,00	130,69
Concreteness	18,94	17,90	7,66	5,50	52,46
Numerical terms	13,04	12,40	5,85	0,00	28,69
Specificity index	0,46	0,50	0,16	0,00	0,88
Total accruals	-0,29	-0,08	0,95	-7,27	1,58
Segment	3,68	3,00	2,19	1,00	10,00
Audit Fee	8,04	8,00	1,40	4,14	15,80
Size	15,35	15,18	1,77	11,01	19,80
Leverage	0,29	0,27	0,16	0,02	0,92
ROA	0,07	0,07	0,15	-1,02	0,75

Panel B: Industry and Auditor breakdown

| Variables	Frequency	Percent
Industry		
High-Tech	44	23%
Audit firm		
Deloitte	27	14%
EY	46	24%
Grant Thornton (GT)	2	1%
KPMG	40	21%
Mazars	2	1%
PwC	71	38%

Note: Number of observations 188.

If we take a look at our Specificity index, the index has a mean of 0,46, suggesting that on average firms tick off 4 out of 8 categories. As can be seen in Figure 1, our data range from one firm that provides no specific information to two firms that provide very specific. HiQ International have the lowest specificity level of 0,00, Gränges and Securitas have the highest specificity level of 0,875. What can be observed in Figure 2 is a variation in what categories firms tick off, most KAM disclosures provide information about money values and dates and less information is provided about locations.

Figure 1: Distribution of specificity
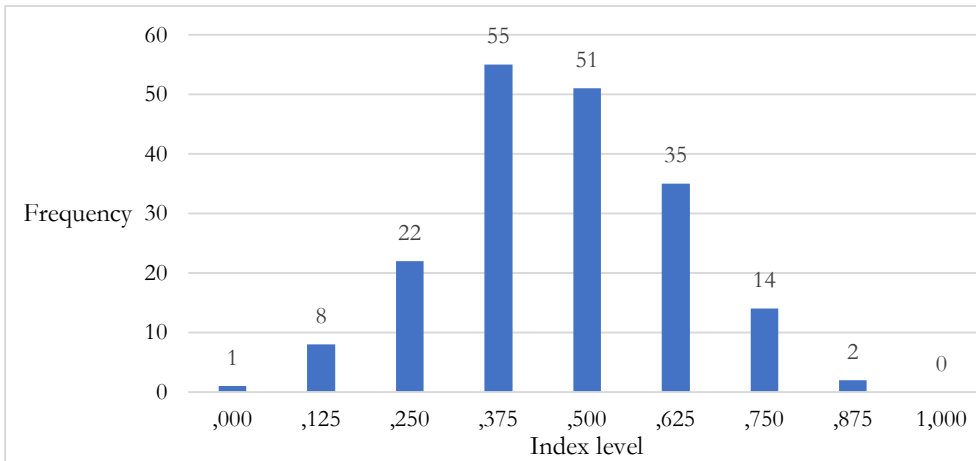
Figure 2: Compliance per category
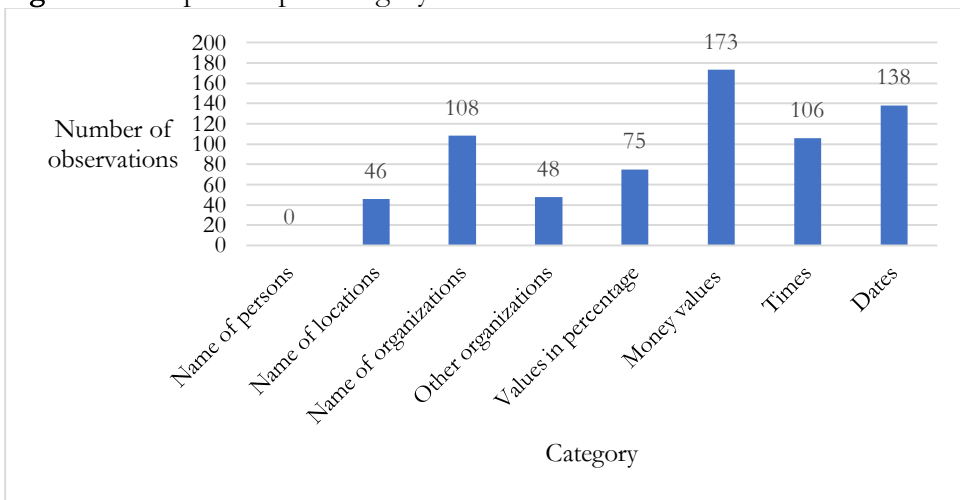
Note: For Figure 1 & 2, number of observations 188.

From Table 4 we can observe a significant correlation between our dependent variables Negative and Uncertainty. For the DICTION variables, Total words is highly correlated with Unique words which is not surprising since longer texts likely contain more unique words. Total words is also correlated with Size. It is notable that the Specificity index is correlated to Total words, Unique words, Numerical terms, and Size. Correlation is also found between our independent variables: Size and Total accruals; Size and Number of segments; Size and Industry; Size and ROA as well as Leverage and Number of segments. Yet, the level of correlation between the independent variables is not found to be problematic.

Table 4: Correlation matrix for variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.Negative	1,0	0,317	0,137	**0,152**	0,107	**0,194**	-0,086	0,048	0,061	-0,120	-0,040	-0,055	0,026	-0,101	-0,116	0,068	**-0,167**	0,119	**0,277**	-0,024	0,056	-0,119
2.Uncertainty	**0,255**	1,0	0,036	0,047	0,029	0,023	**-0,148**	0,040	-0,016	-0,014	0,004	0,021	-0,083	0,066	**-0,225**	0,029	0,123	**-0,168**	0,078	0,047	**0,147**	-0,063
3.Total words	0,129	0,015	1,0	**0,975**	0,159	0,189	-0,266	-0,064	**0,456**	-0,158	0,168	-0,133	0,045	-0,099	-0,059	-0,038	-0,042	-0,044	**0,176**	**0,302**	-0,049	-0,115
4.Unique words	0,139	0,023	**0,986**	1,0	**0,199**	**0,190**	-0,267	-0,103	**0,414**	-0,205	**0,172**	-0,148	0,011	-0,125	-0,113	-0,086	0,010	-0,068	**0,215**	**0,307**	-0,023	-0,141
5.Spatial terms	0,071	0,084	0,093	0,128	1,0	-0,038	-0,103	-0,064	0,041	-0,053	-0,035	-0,055	0,033	**0,203**	**-0,221**	-0,135	**-0,176**	0,044	**0,218**	0,062	0,042	-0,109
6.Temporal terms	0,013	-0,069	**0,163**	**0,158**	-0,057	1,0	**-0,191**	0,112	0,084	0,008	0,067	0,075	**-0,146**	**-0,257**	0,169	0,082	-0,062	-0,072	0,086	-0,034	0,041	**-0,198**
7.Concreteness	-0,107	**-0,212**	**-0,234**	**-0,231**	-0,057	**-0,194**	1,0	-0,093	-0,066	0,081	-0,032	-0,068	0,096	-0,069	-0,059	-0,078	0,063	0,129	0,038	0,016	**-0,197**	-0,032
8.Numerical terms	-0,009	0,007	-0,047	-0,077	-0,022	-0,021	-0,125	1,0	**0,205**	0,007	-0,003	0,030	-0,009	**0,280**	0,106	0,067	-0,034	0,019	**-0,286**	-0,020	0,040	0,038
9.Sepcifity index	0,055	-0,024	**0,504**	**0,475**	-0,027	0,043	-0,112	**0,214**	1,0	-0,101	0,059	**-0,149**	-0,039	0,008	-0,052	**-0,145**	-0,075	0,077	0,118	**0,210**	-0,077	**-0,165**
10.Total accruals	0,021	0,034	-0,043	-0,062	-0,014	0,021	-0,112	0,084	0,008	1,0	-0,080	0,098	0,042	0,055	0,093	0,054	-0,015	-0,005	-0,119	-0,099	**-0,150**	0,124
11.Segment	-0,065	-0,004	0,127	0,126	-0,025	0,091	-0,043	-0,036	0,041	0,028	1,0	-0,084	0,000	-0,042	-0,027	0,035	0,051	-0,140	0,033	**0,295**	**0,159**	-0,050
12.Industry	-0,042	-0,007	**-0,156**	**-0,168**	-0,069	0,031	-0,055	0,022	**-0,148**	0,052	-0,073	1,0	-0,035	-0,011	0,065	-0,057	-0,072	0,065	0,010	**-0,355**	0,004	0,067
13.Audit Fee	0,024	-0,101	0,038	0,022	0,096	-0,012	0,092	0,061	-0,040	-0,057	0,010	-0,033	1,0	-0,009	-0,029	-0,021	-0,042	0,102	0,051	0,051	-0,083	0,095
14.Deloitte	-0,115	0,067	-0,095	-0,119	**0,149**	-0,126	-0,085	**0,298**	0,004	0,112	-0,022	-0,011	0,002	1,0	**-0,233**	-0,042	**-0,213**	-0,042	**-0,319**	-0,084	0,036	0,138
15.EY	-0,124	**-0,189**	-0,076	-0,112	**-0,194**	0,158	-0,039	0,087	-0,045	0,007	-0,029	0,065	-0,035	**-0,233**	1,0	-0,059	**-0,296**	-0,059	**-0,443**	0,060	-0,023	0,020
16.GT	0,038	0,024	-0,038	-0,071	-0,104	0,013	-0,067	0,058	-0,134	0,040	0,039	-0,057	-0,017	-0,042	-0,059	1,0	-0,054	-0,011	-0,081	-0,140	0,020	-0,024
17.KPMG	**-0,179**	0,140	-0,056	-0,020	-0,138	-0,031	0,034	-0,035	-0,066	0,033	0,036	-0,072	-0,032	**-0,213**	**-0,296**	-0,054	1,0	-0,054	**-0,405**	0,062	-0,005	-0,030
18.Mazars	**0,157**	**-0,185**	-0,040	-0,062	0,047	-0,045	**0,179**	0,008	0,064	0,009	-0,127	0,065	0,064	-0,042	-0,059	-0,011	-0,054	1,0	-0,081	**-0,166**	-0,037	-0,023
19.PwC	**0,302**	0,034	**0,199**	**0,231**	**0,193**	-0,016	0,043	**-0,278**	0,108	-0,126	0,030	0,010	0,046	**-0,319**	**-0,443**	-0,081	**-0,405**	-0,081	1,0	0,020	0,002	-0,082
20.Size	-0,040	0,051	**0,324**	**0,329**	0,072	0,101	-0,017	0,013	**0,205**	**-0,172**	0,298	**-0,310**	0,026	-0,072	0,066	**-0,155**	0,038	**-0,180**	0,032	1,0	-0,027	0,038
21.Leverage	0,066	**0,145**	-0,009	0,012	0,032	-0,002	**-0,156**	0,035	-0,060	-0,045	**0,152**	-0,012	-0,056	0,012	-0,008	0,013	0,021	-0,048	-0,012	-0,017	1,0	0,016
22.ROA	-0,043	**-0,168**	-0,055	-0,072	-0,012	0,017	-0,091	0,101	-0,097	0,089	0,029	0,061	0,046	0,175	0,016	-0,104	-0,064	-0,134	-0,036	**0,168**	0,042	1,0

Notes: Pearson correlation estimates are presented below the diagonal and Spearman's rank correlation can be found above the diagonal. Number of observations 188. Boldface indicates a p-value of 0,05 or less.

7. Empirical results

Table 5: Conjectures

Conjectures	Results
Tone	
1A Estimation uncertainty	No support
2A Audit firm characteristics	Support (Audit firm, not Audit fee)
3A Firm financial characteristics	Support (Firm size, Leverage and ROA)
Specificity	
1B Estimation uncertainty	No support
2B Audit firm characteristics	Support (Audit firm, not Audit fee)
3B Firm financial characteristics	Support (Firm size and ROA, not Leverage)

What can be observed in Table 5 is that we do find support for our determinants associated with audit firm characteristics and firm financial characteristics, however we do not find support for the determinants associated with estimation uncertainty. The results will be further developed in the following.

7.1 Determinants of tone

For Conjecture 1A estimation uncertainty, we cannot reject the null hypothesis and there is no association between estimation uncertainty and tone. We have some evidence that supports Conjecture 2A audit firm characteristics and find that there is an association between our determinant Audit firm and tone. However, we find no correlation between audit fee and the tone of KAM disclosures. Moreover, there is support for Conjecture 3A firm financial characteristics, where we find an association between Uncertainty tone and firm financial characteristics. However, there is no association between Negative tone and firm financial characteristics.

Table 6: Regression Tone

	Negative			*Uncertainty*		
	Coeff.		Sig.	Coeff.		Sig.
(Constant)	8,956	*	0,018	5,295		0,121
Total accruals	0,346		0,314	0,308		0,322
Segment	-0,157		0,309	-0,168		0,231
Industry	-0,663		0,405	0,682		0,344
Audit Fee	0,021		0,925	-0,201		0,325
Deloitte	-3,178	**	0,002	0,865		0,338
EY	-2,777	**	0,001	-1,655	*	0,027
GT	-0,334		0,916	0,668		0,815
KPMG	-3,421	***	0,000	0,753		0,332
Mazars	4,942		0,120	-7,942	**	0,006
Size	0,025		0,906	0,316	{*}	0,099
Leverage	2,672		0,188	4,069	*	0,027
ROA	-0,219		0,922	-6,403	**	0,002
R-Sq	0,150			0,164		
Models sig.	0,004			0,001		

Notes: The table presents regression of the tone on KAM disclosures. The dependent variables are; Negative referring to negative words in the texts and Uncertainty referring to the use of words associated with uncertainty. Number of observations 188. ***, **, *, {*} Indicates statistical significance less than the 0,001; 0,01; 0,05; 0,1 level for our two-tailed tests.

Table 6 presents the results of regressing the Negative and Uncertainty tone. We find no association between our determinants associated with estimation uncertainty such as Total accruals, Number of segments and Industry and the tone of KAM disclosures. However, we do find that the Negative and Uncertainty dictionaries from LM (2011) are associated with the audit firms. Further, our determinants Firm size, Leverage and ROA are associated with the Uncertainty tone. Turning to audit firm characteristics, as stated in the Research design, we use the most employed audit firm, PwC, as a benchmark. With respect to audit firm characteristics we find that auditors from Deloitte, EY and KPMG make less Negative KAM disclosures than auditors from PwC and auditors from EY and Mazars make less Uncertain KAM disclosures than auditors from PwC. This suggests that audit firm characteristics, potentially internal guidelines influence the tone of KAM disclosures rather than areas in the financial statement associated with estimation uncertainty. Having the audit firm as a significant determinant is consistent with Hodgdon and Hughes (2016), who note that Big N internal guidelines influence firms IAS 1 disclosures. In addition, with respect to firm financial characteristics we find that auditors of more indebted firms captured by Leverage make more uncertain KAM disclosures. This is consistent with prior audit literature and our expectation, where the auditor likely perceives more leveraged firms as more uncertain since they involve greater financial risk (Craswell, Stokes & Laughton 2002). Also, in accordance with the prior literature and our expectations, we find that auditors of firms with better operating performance involving less operating risk captured by ROA make less uncertain KAM disclosures. As high performing firms involve lower operating risk, auditors most likely have fewer incentives to disclose uncertain information to ensure their independence (Craswell, Stokes & Laughton 2002). Lastly, Reynolds and Francis (2000) put forth that auditors of larger firms report more conservatively to avoid reputational damage. Our results support this as we find that auditors of larger firms captured by Total assets make more uncertain KAM disclosures. This result indicates that auditors have incentives to convey a more uncertain tone when they audit larger clients to avoid reputational damage that an insufficient audit could potentially encompass.

7.2 Determinants of specificity
We find no evidence that supports Conjecture 1B estimation uncertainty. For Conjecture 2B audit firm characteristics, we find an association between Audit firm and Specificity, however, we find no association with Audit fee. For Conjecture 3B firm financial characteristics, namely Firm size and ROA are associated with Specificity, however, no association is found with Leverage.

Table 7 presents the results of regressing specificity on our potential determinants. With regards to our DICTION variables that measure the specificity of the text, we find that the dependent variables such as Total words, Unique words, Spatial terms and Numerical terms are associated with the specificity of the text. Temporal terms and Concreteness are not statistically significant on a 0,05 level. We find that Total- and Unique words both are associated with Firm size and Audit firm. Not surprisingly, the DICTION variables Total words and Unique words are highly correlated, (See Table 4).

Table 7: Regression Specificity

	Total words		Unique words		Spatial terms		Temporal terms		Concreteness		Numerical terms		Specificity index	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
(Constant)	-111,379	0,693	-32,252	0,787	0,617	0,785	-0,549	0,951	21,445 **	0,001	4,407	0,368	0,268 {*}	0,057
Total accruals	17,574	0,495	5,562	0,609	0,080	0,699	0,427	0,600	-0,853	0,159	0,291	0,514	0,012	0,358
Segment	3,696	0,749	1,139	0,816	-0,071	0,448	0,304	0,406	0,038	0,888	-0,143	0,475	0,000	0,959
Industry	-40,824	0,493	-20,863	0,408	-0,263	0,582	1,263	0,503	-1,288	0,358	0,599	0,562	-0,037	0,214
Audit Fee	5,896	0,728	1,003	0,889	0,154	0,258	-0,041	0,939	0,363	0,363	0,308	0,294	-0,007	0,439
Deloitte	-131,049 {*}	0,080	-69,563 *	0,028	0,400	0,505	-2,843	0,230	-1,525	0,385	6,200 ***	0,000	-0,009	0,812
EY	-136,472 *	0,027	-73,272 **	0,005	-1,560 **	0,002	2,851	0,144	-0,638	0,658	2,873 **	0,008	-0,038	0,211
GT	-94,468	0,690	-95,515	0,340	-3,081	0,106	2,754	0,714	-5,779	0,300	6,410	0,120	-0,218 {*}	0,066
KPMG	-134,563 *	0,037	-54,011 *	0,047	-1,398 **	0,007	-0,447	0,826	0,290	0,848	1,710	0,125	-0,052	0,104
Mazars	-51,662	0,828	-60,524	0,547	0,640	0,737	-2,082	0,782	11,605 *	0,039	2,864	0,487	0,121	0,307
Size	62,624 ***	0,000	26,320 ***	0,000	0,159	0,212	0,511	0,307	-0,195	0,599	0,259	0,345	0,020 *	0,012
Leverage	5,979	0,969	21,254	0,740	0,923	0,449	-0,454	0,925	-7,242 *	0,044	1,697	0,519	-0,046	0,545
ROA	-232,293	0,166	-113,353	0,110	-1,116	0,406	0,546	0,918	-2,042	0,604	1,373	0,636	-0,149 {*}	0,074
R-Sq	0,158		0,180		0,122		0,051		0,090		0,150		0,113	
Models sig.	0,002		0,000		0,025		0,663		0,152		0,004		0,044	

Notes: The table presents regression of specificity on the KAM disclosures. The dependent variables are: Total words indicating total number of words in the KAM disclosures; Unique words indicating total number of unique words; Spatial terms showing the persistence of words referring to geographical terms; Temporal terms refers to terms that fix an event or idea to a time interval; Concreteness tangible and material words; Numerical terms refers to sum and dates and Specificity index that measures the specificity in terms of locations, persons, dates and numbers. Number of observations 188. ***, **, *, {*} Indicates statistical significance less than the 0,001; 0,01; 0,05; 0,1 level for our two-tailed tests.

Our result demonstrates that auditors of larger firms make more specific disclosures with respect to Total words and Unique words, i.e. more voluminous disclosures are more specific. Linking this to prior literature, Reynolds and Francis (2000) noted that auditors of larger firms report more conservatively. Our result suggests that auditors of larger firms make more specific disclosures to potentially avoid the reputational damage that an insufficient audit of a larger firm potentially could involve. In addition, compared to auditors from our benchmark PwC, auditors from Deloitte, EY and KPMG make less specific disclosures with respect to Total words and Unique words, i.e. less voluminous disclosures and less specific. Our DICTION variable Spatial terms is negatively associated with EY and KPMG, i.e. auditors from EY and KPMG make less specific disclosure with respect to geographical terms compared to our benchmark PwC. Lastly, our DICTION variable Numerical terms is positively associated with Deloitte and EY. These results demonstrate that auditors from Deloitte and EY include more numeric information in KAM disclosures compared to PwC. What we can distinguish from the above is that the size of the audited firm has implications for KAM disclosures. It seems like auditors of larger firms perceive an enhanced risk and thus make more entity-specific disclosures to protect their reputation. Further, we find a distinct variation among the audit firms' issued KAM disclosures in terms of specificity. This finding suggests that internal audit firm guidelines on KAM disclosures vary and influence how auditors make KAM disclosures, consistent with Hodgdon and Hughes (2016). It is noteworthy that the groups of audit firms that affect specificity differ among the dependent variables. First, Deloitte, EY, and KPMG all have less Total- and Unique words compared to our benchmark PwC, then EY and KPMG have less Spatial terms than PwC and lastly, Deloitte and EY have more Numerical terms compared to PwC. This variation among the audit firms indicates that Big N firms do not have the same internal guidelines. This implies that auditors possess different knowledge within their network and thus have made a different interpretation of how to make KAM disclosures.

Turning to our Specificity index, we find an association with our determinants Firm size, ROA and the audit firm Grant Thornton. Auditors of larger firms captured through Total assets make more specific KAM disclosures, consistent with prior literature where the auditors have incentives to provide relevant information to avoid reputational risk (DeFond & Zhang 2014). Our finding that auditors of firms with better operating performance involving less operating risk captured through ROA make less specific KAM disclosures is in line with our expectation and prior literature. Craswell, Stokes and Laughton (2002) put forth that firms with inferior operating performance involve greater operating risk and thus auditors were expected to make more specific disclosures to ensure their independence. Moreover, what can be noted is that auditors from Grant Thornton make less specific KAM disclosures compared to PwC. It is also of interest to further analyze our descriptive statistics, (See Figure 1 & 2). We can distinguish a clear variation in specificity among our sample with respect to what type of information that is disclosed. Linking this variation to the regulation ISA 701, our result indicates that there is a large spread when it comes to how entity-specific KAM disclosures are. Our results are not altogether consistent with the intention of IAASB, that the disclosures should be entity-specific. However, the fact that the disclosures are more or less specific to some degree, demonstrates that the process to achieve more entity-specific KAM disclosures as well as audit reports is set in motion.

Overall, in terms of how informative KAM disclosures are, our results suggest that the disclosures are less informative than what they ought to be. IAASB define auditor communication as informative when it is entity-specific and they emphasize that subjective estimates and judgments made by management should be reflected in KAM. Our findings demonstrate that KAM disclosures are entity-specific to a lesser extent and firms' underlying economics captured through estimation uncertainty is neither reflected in the tone of KAM nor in specificity. We find that the determinants associated with audit firm characteristics and firm financial characteristics drives

variations in the tone and specificity of KAM disclosures. These findings suggest that it is not firms' underlying economics captured through estimation uncertainty that drives how auditors make KAM disclosures. It rather seems to be for instance internal guidelines and reputational protection that drives variations in KAM disclosures, which is not a desirable feature. Having factors other than firms' underlying economics related to KAM disclosures indicate a lack of informativeness.

7.3 Robustness test

In order to examine the robustness of having audit firm as a determinant, we performed an additional test. As PwC audits 38% of the sample (See table 3, Panel B), it is of interest to further investigate how well PwC works as a benchmark and whether PwC differs among the sample since this affects the interpretation of our results. To perform the robustness, we repeat the multivariate regression analysis and adjust the audit variable to capture whether the firm was audited by PwC or any other audit firm.

What can be observed in Table 8 is that the results from the robustness test are consistent with our empirical results. There is statistical significance among PwC and the other audit firms for all variables except for Uncertainty and the Specificity index. The overall model for Temporal terms and Concreteness is not significant, consistent with prior tests. Except for audit firm, the other determinants that were statistical significant in prior tests, also show an overall significance in the robustness test. We have some deviations from our prior tests, wherein Size is not significant for Uncertainty, ROA is significant for Unique words and Audit fee is significant for Spatial- and Numerical terms. Additionally, for those dependent variables where PwC is statistically significant (Negative, Total words, Unique words, Spatial terms, and Numerical terms), we interpret that PwC is working well as a benchmark to analyze our empirical results. We can mainly observe that there is a deviation in how Big N audit firms make KAM disclosures. In terms of; Negative, auditors from PwC make more negative KAM disclosures and auditors from Deloitte, EY and KPMG make less negative disclosures; Total words, auditors from PwC make longer KAM disclosures and auditors from Deloitte, EY and KPMG make shorter disclosures; Unique words, auditors from PwC use more unique words and auditors from Deloitte, EY and KPMG use less unique words; Spatial terms, auditors from PwC include more geographical terms and auditors from EY and KPMG include less geographical terms; Numerical terms auditors from PwC include less numerical terms and auditors from Deloitte and EY include more numerical terms. With the robustness test, we strengthen our empirical results, namely that there is a variation among the Big N audit firms and how they make KAM disclosures.

Table 8: Robustness test

	Negative		Uncertainty		Total words		Unique words		Spatial terms		Temporal terms		Concreteness		Numerical terms		Specificity index	
	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig	Coeff.	Sig
(Constant)	7,674 *	0,016	3,258	0,272	-170,190	0,465	-92,149	0,350	1,160	0,537	-2,682	0,720	24,523 ***	0,000	11,501 **	0,005	0,179	0,128
Total accruals	0,326	0,346	0,377	0,244	17,139	0,500	5,537	0,606	0,084	0,680	0,344	0,673	-0,921	0,132	0,303	0,494	0,012	0,331
Segment	-0,179	0,249	-0,117	0,417	3,949	0,728	1,233	0,798	-0,097	0,291	0,280	0,444	-0,014	0,959	-0,159	0,425	-0,002	0,752
Industry	-0,624	0,433	0,369	0,619	-43,746	0,453	-21,894	0,375	-0,237	0,614	1,712	0,361	-1,143	0,415	0,532	0,601	-0,031	0,295
Audit Fee	1,217E-07	0,840	-2,090E-07	0,711	-1,933E-05	0,663	-7,673E-06	0,682	1,272E-06 ***	0,000	1,030E-06	0,470	-2,897E-07	0,786	2,362E-06 **	0,003	1,355E-09	0,952
Audit PWC	2,905 ***	0,000	0,336	0,587	135,140 **	0,006	66,844 **	0,001	0,949 *	0,016	-0,484	0,757	0,459	0,694	-3,465 ***	0,000	0,036	0,145
Size	-0,059	0,774	0,307	0,112	61,032 ***	0,000	26,465 ***	0,000	0,138	0,261	0,652	0,182	-0,210	0,564	0,169	0,523	0,020 **	0,009
Leverage	2,461	0,229	4,393 *	0,022	-1,020	0,995	20,550	0,746	0,899	0,457	-0,347	0,943	-7,702 *	0,033	1,659	0,526	-0,046	0,547
ROA	-0,938	0,669	-5,628 **	0,007	-235,363	0,145	-115,487 {*}	0,091	-0,348	0,789	-0,764	0,883	-3,121	0,420	3,029	0,283	-0,141 {*}	0,084
R-Sq	0,113		0,071		0,158		0,178		0,113		0,023		0,049		0,136		0,082	
Models sig.	0,005		0,100		0,000		0,000		0,005		0,839		0,331		0,001		0,048	

Notes: The table presents the additional analysis for Tone and Specificity, with the audit firm changed to a dummy variable if the firm was audited by PwC or not. All else are equal to Table 6 and Table 7. Numbers of observations 188.
***, **, *, {*} Indicates statistical significance less than the 0,001; 0,01; 0,05; 0,1 level for our two-tailed tests.

8. Conclusion

In this paper, we have examined whether KAM disclosures are informative. This through exploring potential determinants that drive variations in the tone and specificity of KAM disclosures in the audit report. We expected that determinants associated with estimation uncertainty constituting firms' underlying economics, audit firm characteristics and firm financial characteristics would drive variations in KAM disclosures. To examine the association, we used a Swedish sample comprising of listed non-financial firms on Nasdaq Stockholm. We employed textual analysis through applying different dictionaries, one Negative- and one Uncertainty wordlist from LM (2011) and also various DICTION wordlists. To fine-tune our examination, we also developed a binary Specificity index, grounded in Hope, Hu and Lu (2016).

The evidence from this study suggest that KAM disclosures are informative only to a limited extent. Our study demonstrate that ISA 701 do not work as intended since KAM disclosures do not reflect firms' underlying economics and do not hold a high level of specificity. We find that determinants associated with audit firm characteristics and firm financial characteristics drive variations in the tone and specificity of KAM disclosures in Swedish listed firms. As Audit firm is statistically significant with the tone and specificity is an indication that it may be audit firms' internal guidelines that influence how auditors make KAM disclosures rather than firms' underlying economics. Beyond this, having determinants associated with firm financial characteristics as drivers of the variation in the tone and specificity of KAM disclosures show that much of the variation in KAM disclosures is driven by firm characteristics. This indicates that auditors have other incentives when they make KAM disclosures such as for instance reputational protection. Turning to our Specificity index, our result demonstrates that there is a large spread in how specific KAM disclosures are, ranging from not specific at all to very specific. This finding further settle that KAM disclosures lack informativeness.

Taken together, these results suggest that the audit report as a whole have become more entity-specific since the introduction of ISA 701. Notwithstanding, our study provide evidence that ISA 701 do not work as IAASB indented. We believe that our findings might be useful for IAASB and practitioners. If auditors report to the letter in accordance with internal guidelines, it may potentially lead to "ticking the box" reporting and non-entity-specific disclosures in the future. Our paper suggests that standard-setters should encourage practitioners to have the audited entity more in mind when making KAM disclosures to avoid standardized, irrelevant and non-informative disclosures. They should also urge them to reflect accounting estimates associated with high estimation uncertainty and management judgment in KAM disclosures. We believe that this subsequently will invigorate the audit report and make it more informative.

8.1 Limitations and future research

We are aware that our research has some limitations. Firstly, most of our proxies used in this study are borrowed from the accounting field since there is no strong theory pertaining to the audit literature. There are difficulties with capturing and measuring underlying economics, accordingly, there may be other variables than those identified in our paper that cause variation in KAM disclosures. Secondly, our regression models have R-square values that are at highest explaining 18% of the models, this implies that 82% of the tone and specificity of the disclosures are explained by other determinants. Thirdly, due to the recent effective date of ISA 701, we only have access to audit reports one-year post-implementation. Thus, we cannot make any comparison over years and distinguish how KAM disclosures develop over time. Lastly, there is not a vast amount of research available on KAM disclosures due to the recent effective date. Accordingly, our study is of

explorative character and our results should be interpreted with some caution. This calls for more research within the field.

For future research, it would be of interest to examine whether KAM disclosures are informative over time. There is a prevailing risk that auditors in the succeeding years will "look at each other" and develop praxis and consequently make standardized and boilerplate KAM disclosures. This would further reduce their informativeness. Another area of interest would be to compare KAM disclosures made by auditors and risk disclosures made by management in compliance with IAS 1 Para. 122 and 125. As such, these disclosures should cohere as the IAASB state that auditors should not provide new information. Notwithstanding, since management and auditors are driven by different incentives to disclose information, these disclosures potentially differ. Thus, it would be interesting to distinguish what potentially determine auditors to disclose in one way and what determine management to disclose in another. Finally, in this study we have attempted to capture firms' underlying economics through estimation uncertainty proxied by Total accruals, Number of segments and Industry. Due to the fact that underlying economics as such is hard to capture, future research could include other proxies to examine whether KAM disclosures reflect accounting estimates associated with high estimation uncertainty. This is highly relevant since our study demonstrates that KAM disclosures do not reflect estimation uncertainty as they ought to. Together with this suggestion, it would also be of interest to further fine-tune our Specificity index by counting the frequency of entity-specific words, this would yield a more sophisticated analysis.

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Appendix 1

Specificity index

Category	Description	Example from Securitas Auditor report of 2016
Name of persons	Names of defined persons	-
Name of locations	Countries, geographical areas or places	Ongoing tax audits in the US and Spain
Name of organization (the audited)	The audited organization	Securitas
Name of organization other than the audited	Other organizations e.g., subsidiaries, suppliers, specialist from the audit firm is not included	The acquisition of Securitas Electronic security
Values in percentage	Specific values in percentage	Corresponding to 43 percent of the balance sheet total
Money values	Values given in SEK and EUR	Goodwill of MSEK 1900
Times	Time related but not specific dates, year yields a point if it is not written with a specific date	Affecting goodwill in 2016
Dates	Specific dates	Consolidated balance sheet at December 31, 2016

Notes: The index is grounded in the NER tool used by Hope, Hu and Lu (2016). We have customized the index to have two categories for organizations, both the audited and other. The index gives one point for each category that is ticked off, total points is divided on the number of categories (8).