Corporate Risk Disclosure and Key Audit Matters: The Egocentric Theory

Abstract

Purpose

The paper provides unique interdisciplinary research evidence between the risk information disclosed by auditors and the risk information disclosed by corporate managers. In particular, it investigates the association between the level of risk information disclosed by auditors (KAMs) and the level of corporate narrative risk disclosure.

Design/methodology/approach

The study sample consists of the UK FTSE all-share non-financial firms across six financial years. We use a computer-aided textual analysis, and we use a bag of words to score our sample annual reports.

Findings

The results suggest that Key Audit Matters (KAMs) and corporate narrative risk disclosure levels vary across the industries. We found a significant positive association between the risk information disclosed by auditors and the risk information disclosed by corporate managers. Also, we found that FTSE 100 firms exhibit higher significance between the ongoing concern and the level of narrative risk disclosure.

Practical implications

The study approach helps assess the level of management risk reporting behaviour due to the new auditor risk reporting standards. This helps to emphasise how auditors and companies engage and communicate risk-related information to stakeholders. Standard setters should suggest a more detailed reporting framework to protect the shareholders. Our unique findings are incredibly beneficial to the regulators, standard setters, investors, creditors, suppliers, customers, decision-makers and academics.

Originality/value

This paper provides a shred of extraordinary evidence of the impact of auditor risk reporting and management risk reporting. To the best of the authors' knowledge, no study has yet investigated the corporate narrative disclosure after the new audit standards ISA 700 and ISA 701.

Keywords: Key Audit Matters, risk disclosure; textual analysis; UK.

1. Introduction

Because of the financial crisis, in early 2011, the Financial Reporting Council (FRC) introduced some suggestions in its Consultation Paper "Effective Company Stewardship- Enhancing Corporate Reporting and Audit (FRC, 2011)". The paper recommended changes needed to the auditing standards. In response to the belief that the audit reporting needs improvement, several phases of global approaches have been in place to change the independent audit report's style and contents (Sierra-García, Gambetta, García-Benau, & Orta-Pérez, 2019). In 2013, the UK became the first country to introduce (ISA 700 UK and Ireland) expanded audit reports (Hogan, Schmidt, & Thompson, 2015). The first reports are required for the September 2013 year-ends. Also, in June 2016, the UK was the first country to adopt ISA 701 (KAMs). The IAASB defines KAMs in the ISA 701 as:" Those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period.

Narrative reporting has been the management most common communication channel with the stakeholders (Elmarzouky et al., 2021; Boura et al., 2020; Fisher et al., 2019; Cabeza-García et al., 2018). The central bank of England in 2017 reported that around 90% of the financial information was extracted from the narrative sections rather than the financial statements ((Bank of England, 2015; Lewis and Young 2019). According to Srinivasan (2018), it is more beneficial to analyse the narrative sections on the annual reports than to focus only on the financial statements or the quantitative data provided by the management (Karim et al., 2021: Moroney et al., 2021). Beattie, McInnes, & Fearnley (2004) highlighted that it is hard to quantify all the management's information to deliver to the stakeholders. There is also an increase in the volume of narrative disclosure. Fisher et al. (2019) estimated that between 80-90% of all business information might originate in narrative form by 2020. Therefore, textual analysis became increasingly important in accounting, auditing and finance research (Loughran and McDonald, 2016; Fisher et al., 2019).

Egocentric bias theory suggests managers will always have the ego to control the stakeholder's decision (Grossman, L. 2018); therefore, they will disclose a higher

volume of information than the external auditors. We expect this will increase the level of voluntary risk disclosure by corporate managers.

So, the question arises whether disclosing more KAMs by the auditors will increase the level of narrative risk disclosure by corporate managers. Therefore, we investigate how risk disclosure behaviour by the auditor will impact management disclosure practice behaviour.

We are motivated by the global phenomenon that attracted the attention of policymakers and academics after the outburst of the financial crisis and corporate scandal. Also, the need from stakeholders for new auditing regulations to increase the level of information and transparency. Given that, the academic research far from conclusive whether this new regulation has achieved the target from it. And with no standardized templates for KAMs, the impact of KAMs is empirically unclear.

This paper has several contributions. First: we have a unique theoretical contribution by applying a psychological theory (the Egocentric theory) in accounting research. The egocentric theory suggests that humans will always have the final impact on others. So, managers will ever care to drive the stakeholders' decisions (Krause et al., 2015). Our finding supports the theory's claim. The increase of KAMs will pressure the management to disclose more information themselves. Second: we contribute to disclosure and auditing literature by filling an important research gap. The link between auditor disclosure and management disclosure is yet to be researched; our paper is the first is contribute to this gap in the literature. Third: we provide empirical evidence on how the management risk discourse reacts to the ISA 701 KAMs. We also show that the level of the relationship between the KAMs and the management risk disclosure varies with different market capitalisation.

2. Literature review and hypotheses development

On 15th December 2016, the ISA 701 came into force in the UK, which changed the independent auditor's focus to a risk-based audit approach. The ISA 701 communicating KAMs is a new concept in the audit process. According to ISA 701, the auditors need to identify and disclose any risk-related matter in their professional opinion. From the theoretical debate on the consequences of KAMs on

narrative risk disclosure, KAMs will lead managers to disclose more risk-related information. This change will be more sensitive when considering the risk topics disclosed by the auditors.

2.1 Key Audit Matters and the Corporate Narrative Risk Disclosure

Previous literature provides evidence of a significant positive relationship between the KAMs and the financial reporting quality in general (Reid et al., 2019: Gutierrez et al., 2018: Bentley et al., 2021). Reid et al. (2019) provide empirical evidence that the existence of the new audit report has a positive association with the financial reporting quality; the management has two motives to react to the risk disclosed by the auditors: First, the threat of being exposed by the auditors. Also, to give account for the auditor's work (Reid et al., 2019). Egocentric bias theory suggests that the management will always disclose more information than the auditor drive for the stakeholder's decision (Grossman, 2018). Therefore, we argue that providing more KAMs in the audit report is associated with more corporate narrative risk disclosure.

H1: Ceteris paribus, there is a positive relationship between the KAMs and the corporate narrative risk disclosure.

2.2 Firm Market Capitalisation and the Level of Risk Disclosure

Previous literature suggests that large firms will have a stronger association between KAMs and corporate narrative disclosure. This aligns with Abraham and Cox (2007), the paper argues that FTSE 100 will disclose more risk information. The FTSE 100 firms tend to disclose more risk-related information (Yang et al., 2020; Siddiqui, 2015), and likewise, firms are not FTSE 100 tend to disclose less level of corporate information (Williams, 2001; Abraham and Cox, 2007). Moreover, if a firm is listed on FTSE 100, that means that the governance mechanism is strong (Ko et al., 2019), and the corporate governance contributes to the effectiveness of the narrative disclosure (Elshandidy and Nero, 2015; Allini et al., 2016; Salem et al., 2019). FTSE 100 means a stronger board of directors and more pressure on the management to increase the level of voluntary narrative discourse in general. Based on that, we proposed that firms listed on FTSE 100 with stronger corporate governance will have a higher level of risk disclosure associated with audit risk

disclosure (KAMs). The association between the KAMs and the risk disclosure will be higher for the firms listed on FTSE 100.

Also, the firm listing is an essential factor in reflecting on how the firm management performs. FTSE 100 is the firm listed on the London Stock Exchange with the highest market capitalisation. FTSE 100 firms will have a higher level of voluntary disclosure than other firms will (Slack, Shrives, Bamber, & McMeeking, 2010). If the firm is listed with higher market capitalisations, it will have a more robust governance mechanism than the other firms (Bowstead, 2020). Therefore, we argue that a firm with higher market capitalisation is associated with the higher impact of KAMs on management narrative risk disclosure.

H2: Ceteris paribus, KAMs is positively associated with a higher level of corporate narrative risk disclosure for firms with high market capitalisation compared with firms with low market capitalisation.

3. Research Method

3.1 Sample and Data Collection

We applied our research on FTSE-All-share non-financial firms for over six years, from 2013 to 2018. We excluded financial firms because those firms have different disclosure regulations. We extract the risk narrative reporting sections on the independent audit report (KAMs) and extract the risk-related information from the whole annual report. This will help assess the level of disclosure between the auditor and the management. We adopted an automated content analysis software. We used CFIE[1] (Corporate Financial Information Environment). This software has been used recently in the accounting literature (Lewis & Young, 2019). The software extracts the narrative sections from the UK annual reports PDF files.

We applied our paper in the UK context for many reasons; first: The UK is the first country to adopt the extended audit report, and it is mandatory. Second: The UK has had an extended audit report mandatory since year-end 2013. Last. The UK has had

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[1] CFIE is a research programme exploring accounting and financial market text using natural language processing (NLP) and corpus linguistics methods (El-Haj et al., 2019).

the KAMs mandatory since year-end 2017. The KAMs in the UK used to be included under the RMM (Risk Material Misstatement) since 2013 (FRC 2013a).

3.2 Research Models and Variables Measurement

Linsley & Shrives (2006, p. 389) defined corporate narrative risk disclosure based on the risk covers positive and negative words. Elshandidy et al. (2015) provide the latest updated risk disclosure index based on this definition. Ibrahim and Hussainey (2019) argue that corporate risk narrative disclosure should only contain negative words. We used both definitions for corporate narrative risk disclosure.

3.2.1 Risk Disclosure Measurements

We run our automated textual analysis using the conducted wordlist related to the corporate narrative risk disclosure by Ibrahim and Hussainey 2019; Elshandidy et al. 2015. We determined the final two wordlists likely to capture the corporate narrative risk disclosure in the annual reports.

3.2.2 Research Model

We used a multivariate regression model to explore the relationship between the KAMs and the corporate narrative risk disclosure using different risk disclosure keywords. We also controlled the year fixed effect, and the industry fixed effect by creating industries and dummies. This step was necessary to illuminate our results' year and industry effect. Our industry classification is based on the SIC one-digit industry classification collected from Eikon database[2]. Following the risk disclosure literature, as explained below, we choose our control variables to cover three groups (firm characteristics, governance characteristics and audit committee characteristics). The models are as follow:

Model 1: We measured the corporate narrative risk discourse by the wordlist index developed by Ibrahim and Hussainey (2019). The wordlist is based on the negative words only in the annual reports. The association in this model was tested using KAMs and the corporate narrative risk disclosure in the same year. The management already knows the KAMs in advance as the auditor have frequent meetings with the

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[2] ISIN code is used (rather than the firm's name) to identify each annual report on Eikon.

audit committee (Deloitte, 2018). So, we assume the effect of the audit risk disclosure will increase the management risk disclosure in the same financial year.

$Risk1_{i,t} = \beta_0 + \beta_1\ KAMs_{i,t} + \beta_2\ Going\ concern_{i,t} + \beta_3\ Total\ assets_{i,t} + \beta_4\ Beta_{i,t} + \beta_5\ Current\ Ratio_{i,t} + \beta_6\ ROE_{i,t} + \beta_7\ Non\text{-}audit\ fees_{i,t} + \beta_8\ Board\ size_{i,t} + \beta_9\ CEO\ Duality_{i,t} + \beta_{10}\ IND\ directors_{i,t} + Year\ Fixed\ Effects + Industry\ Fixed\ Effects + \varepsilon_{i,t}$

where for company *i* in year *t*.

Model 2: In this model, we measured the corporate narrative risk discourse by the wordlist index developed by Elshandidy

Fraser, and Hussainey (2015). The wordlist is based on the positive and negative words in the annual reports. The association in this model tested using KAMs and the corporate narrative risk disclosure in the same year for the same reason discussed in Model 1.

$Risk2_{i,t} = \beta_0 + \beta_1\ KAMs_{i,t} + \beta_2\ Going\ concern_{i,t} + \beta_3\ Total\ assets_{i,t} + \beta_4\ Beta_{i,t} + \beta_5\ Current\ Ratio_{i,t} + \beta_6\ ROE_{i,t} + \beta_7\ Non\text{-}audit\ fees_{i,t} + \beta_8\ Board\ size_{i,t} + \beta_9\ CEO\ Duality_{i,t} + \beta_{10}\ IND\ directors_{i,t} + Year\ Fixed\ Effects + Industry\ Fixed\ Effects + \varepsilon_{i,t}$

where for company *i* in year *t*.

Risk1: Measured by Ibrahim and Hussainey wordlist (Ibrahim and Hussainey 2019)[3].

Risk2: Measured by Elshandidy et al. wordlist (Elshandidy et al. 2015)[4].

We use the bag of word method (Andreou, Harris, & Philip, 2020; Hoberg & Moon, 2017).

KAMs: Measured by the number of risk topics highlighted in the independent audit report.

Going concern: This is measured by whether the auditor has indicated a going concern issue in the independent audit report (Abdelfattah et al., 2020; Lennox, Schmidt, & Thompson, 2019).

Total assets: As a proxy for the firm size, measured by the logarithm of total assets (Linsley & Shrives, 2005; Linsley & Shrives, 2006; Abraham & Cox, 2007; Elzahar & Hussainey 2012; Elshandidy et al., 2013; Al-Shammari, 2014; Khlif & Hussainey, 2016; Bernardi and Stark, 2018; Kao et al., 2018; Linsley, Shrives, &

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[3] Full wordlist for risk1 is provided in appendix 1.
[4] Full wordlist for risk2 is provided in appendix 2.

Wieczorek-Kosmala, 2019).

Beta: Is a measurement of its volatility of returns relative to the entire market slope of the 52-week regression line of percentage price change of the stock relative to its benchmark (Abraham & Cox, 2007; Dobler et al., 2011; Elzahar & Hussainey, 2012; Hernández Madrigal et al., 2015).

Current ratio: The current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations, measured by total current assets divided by total current liabilities (Elzahar & Hussainey, 2012; Al-Shammari, 2014).

ROE: A measure of the return generated on the net assets of the company calculated by dividing the company's net income by its average shareholders' equity.. (Linsley & Shrives, 2006; Elzahar & Hussainey, 2012; Elshandidy et al., 2013; Al-Shammari, 2014; Hernández Madrigal et al., 2015; Habbash et al., 2016 Bernardi and Stark, 2018; Kao et al., 2018; Modugu & Ph, 2018; Hassan, Giorgioni, & Romilly, 2006).

Non- audit fees: The natural logarithm of the non-audit fees (Samaha, Dahawy, Hussainey, & Stapleton, 2012; Elshandidy et al., 2013).

Board size: The total number of directors on the board of each sample firm (Abraham & Cox, 2007; Allegrini and Greco, 2011; Elshandidy et al., 2013; Ntim et al., 2013; Javaid Lone et al., 2016; Husted and Sousa-Filho, 2018; Orazalin, 2019).

CEO duality: If the CEO is combining the roles of the CEO and the chair of the board of directors (Beretta & Bozzolan, 2004; Gisbert & Navallas, 2013; Elshandidy et al., 2013; Abraham & Cox, 2007).

IND directors: The percentage of the independent directors in the board of directors (Chen & Jaggi, 2000; Abraham & Cox, 2007 Lim et al., 2007; Ntim et al., 2013; García-Meca & Śnchez-Ballesta, 2010; Gisbert & Navallas, 2013; Elshandidy et al., 2013; Hernández Madrigal et al., 2015; Samaha et al., 2015; Habbash et al., 2016; Salem et al., 2019).

[INSERT TABLE 1 HERE]

4. Empirical Results

We applied both univariate (correlation) and multivariate analyses (regression). We run

ordinary least squares and (OLS), fixed effect and Tobit regression models. All regressions are run with robust standard errors clustered by country and using year-fixed effects to address cross-sectional dependence or time effects (heteroscedasticity). We uses fixed effects based on the Hausman test (Winship et al. 2016). As our dependent variable (risk disclosure) in all our models fell on one side (absolute), there is no score for risk disclosure that is negative or below zero. We used Tobit regression; the Tobit model, also called a censored regression model, is designed to estimate linear relationships between variables when there is either left- or right-censoring in the dependent variable only (Winship et al. 2016).

4.1 Descriptive statistics and correlation analysis

Table 2 presents the mean of the KAMs and the corporate narrative risk disclosure score across the industries. It can be noted that there is some risk disclosure within the industries that were more sensitive to KAMS than other industries. For example, materials have KAMs 3.3 while the risk scores are 564 and 945 on risk1 and risk2 respectively, although communication service KAMs mean is 4, and it has risk score 474 and 839 risk1 and risk2 respectively. The latest has higher audit risk disclosure KAMs but a lower level of risk disclosure. This suggests that some industries risk reporting is oriented or more dominated by the risk reported by the independent auditors in the audit report than others, while others show less risk reporting response to KAMS. We found that industries such as energy are likely to include more narrative risk disclosure information with 606 and 1076 risk1 and risk2 scores, respectively. This high-risk disclosure in the energy industry was associated with a high KAMs (4.07) level. It also is shown that industries such as real states report a low level of risk information (234 and 533 for risk1 and risk2) and at the same time has the lowest level of KAMs (2.3). This is consistent with our hypotheses that the more risk reported by the auditors will lead to more risk reported by the management. The energy (606 and 1076) and the telecommunication industry (474 and 839) came at the top of the list in providing both more risk-related information in the annual report and the highest risk topics in the audit report (4.07 and 4.09 KAMs, respectively). It is noted that real estate has the lowest level of risk disclosure (234 and 533), which is also associated with the lowest mean of KAMs (2.03). This relationship can be explained by when auditors discuss more risk in the

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independent audit report; the management will tend to disclose more risk-related information in order to reduce the information asymmetric, looking at the Materials (3.3 KAMs, 564 risk1, and 946 risk2) and the Health care industries (3.7 KAMs, 489 risk1, and 878 risk2), they came on the second and third respectively on the list. It is undeniable that health care has a high-risk information volume, and it has the most risk topics to be discussed by the auditors. We conclude that both KAMs, the first corporate risk disclosure score and the second corporate narrative risk disclosure score, varies from industry to industry.

[INSERT TABLE 2 HERE]

Table 3 shows descriptive statistics of the variables we used in our research. The table includes the mean, STD, min and maximum values for the variables. The table shows that the mean risk 1 disclosure score is 411 with a maximum value of 1260 and a minimum of 60, which express that risk-related information varies from one firm to another. It also shows that the mean risk 2 disclosure score is 753, with a maximum value of 2123 and a minimum value of 112. Further, the mean value of KAMs equals 3 with maximum and minimum values of 10, 0, respectively. Also, the mean value of going concern 0.04, Ln. Total assets 7.3, beta 0.616, current ratio 1.84, return on equity 18.07, while the mean for non-audit fees, the board size, CEO duality and the percentage of independent non-executive directors in the board are 25.9%, 8.9, 0.07 and 58%, respectively.

[INSERT TABLE 3 HERE]

Table 4 shows the correlation matrix for the independent variables. The correlation matrix shows the correlation between Going concern and KAMs and the correlations among the other control variables. They all come consistent with the literature, the more going concern associated with more KAMs. There is also a positive correlation between (firm size, firm risk, gearing, board size and the percentage of independent directors) and the audit risk topics (KAMs). It also shows a negative correlation between (the firm liquidity profitability, non-audit fees and CEO duality) and the audit risk topics (KAMs), which is consistent with the literature. There is no sign of any multicollinearity problems.

[INSERT TABLE 4 HERE]

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4.2 **Multivariate Analysis**

Table 5 shows the regression results for the constructed model using risk 1 (Ibrahim and Hussainey 2019) wordlist; the table shows that the KAMs disclosure has significantly increased the corporate narrative risk disclosure with the annual report at a 99% confidence level. The coefficient between the KAMs and the risk disclosure is 40.101. Every 1 additional KAMs disclosed by the auditor results in an increase of 40.101 in the management risk disclosure. This result suggests that the more audit risk disclosure, the more the management risk disclosure. This came supporting our hypothesis. The result came with consistency with the Egocentric theory and previous literature. Reid et al. (2019) expected that the KAMs would play as a thread for the management and increase reporting quality. Egocentric bias theory suggests managers will always have the ego to control the stakeholder's decision (Grossman, L. 2018; Bédard wt al., 2016; Bédard et al., 2014), and this will apply pressure on them to increase the level of risk disclosure as a result of KAMs. We run Housman test regression to explain the rationale behind choosing the fixed-effect model; the p-value <0.05 is significant. So, we use fixed effects as the results of the Hausman test. Table 10 suggests that the fixed effect should be used. We used Tobit regression for the reasons explained previously (our dependant variables is on one side and always positive) (Winship et al. 2016).

We have used different regression (OLS, Fixed effect and Tobit) to reduce the standard error, and the results remain consistent, positive and significant at a 99% confidence level. The coefficient between the KAMs and the risk disclosure using the fixed effect and the Tobit regression is (31.125 and 40.101) respectively. This means every additional KAMs reported will increase the risk disclosure by 31.125 units and 40.101 units. The coefficient of KAMs is significant at a confidence interval of 99% and positive with the risk disclosure in all models. This suggests a positive relationship between the risk disclosure in the audit report (KAMs) and the risk disclosure by the management in the annual reports 99% confidence interval. We can interpret this result as the more the independent auditor will disclose more risk topics, the more the management will disclose risk-related information. All-over, it is apparent that the audit risk disclosure level (KAMs) is associated positively with the management risk disclosure level. This is in line with

previous literature (Reid et al. 2019) and the Egocentric theory (Grossman, L. 2018). The table also shows the regression results of the control variables, the coefficient of going concern is positive and significant in all the regression models (154.05, 95.10, 154.05 respectively) at confidence Interval 99%., suggesting that the firms with going concern issue report higher level of risk disclosure within the annual reports comparing with firms with no going concern issues. This is consistent with the literature. The results also suggest that the coefficient of firm size is positive and significant, with coefficients 0.00400, 0.00152, 0.00365 in all models at the confidence with an Interval of 99%. This means that the bigger the firm, the more risk information will be disclosed (Genç et al., 2021). These results also aligned with the previous literature and the agency theory (Elshandidy et al., 2016). It also shows that the firm risk factor measured by Beta is positive and significant at a confidence interval of 99%, suggesting that the firms with a higher percentage of risk factors are associated with reporting a higher level of risk disclosure than firms with a lower risk factor. The coefficient for Bata (0.0207, 0.0276, 0.0201 respectively). We also controlled for the corporate governance characteristics. Board size suggests a significant and positive association with risk disclosure at coefficient (0.0026, 0.00151, 0.0026, respectively).

Firms with large board size will have stronger governance mechanisms, thus more risk voluntary disclosure. The percentages of independent directors on the board of directors' coefficient are 0.083 and 0.001, and significant level of 99% for OLS and Tobit regression results. The results suggested that firms with higher percentages of non-executive directors will have more governance power over the management, therefore more risk voluntary disclosure. This came to consistency with the previous literature (Reid et al. 2019). The non-audit fees result suggests a significant negative relationship with the risk disclosure at confidence Interval 95% with a coefficient (-0.021 in both OLS and Tobit regression); the more non-audit fees, the weaker the independence, the lower of risk-related information disclosure. These results came consistent with the literature.

[INSERT TABLE 5 HERE]

4.3 Robustness Check

Table 6 shows the regression results for the constructed model based on the wordlist developed by Elshandidy et al. 2015; the table shows that the KAMs disclosure still and remains has significantly increased the corporate narrative risk disclosure with the annual report. The coefficient of KAMs is 58.12, 49.70 and 58.12 means adding one KAMs suggest the managers will increase the risk disclosure by 58.12, 49.70 and 58.12 and 60.27 units. The results are significant at a confidence interval of 99% and positive with the risk disclosure in all models. These results suggest a positive relationship between the risk disclosure in the audit report (KAMs) and the management's risk disclosure in the annual reports.

[INSERT TABLE 6 HERE]

4.4 Additional Analysis

We created another two research models that have lagged the KAMs by one year. There is a debate about whether the risk disclosed in the independent audit report should affect the same year annual report risk disclosure or the following year. There are meeting throughout the year between the independent auditor and the audit committee. The KAMs are already known to the management before they are mentioned in the audit report. Moreover, there is a time lag -around three months- in the UK between producing the annual report and publishing it to the stakeholders.

In comparison, others argue that the independent audit report is usually written after the annual report. Therefore, it should influence the annual report for the following year.

Table 7 shows the regression results for the constructed model using risk 1 (Ibrahim and Hussainey 2019) wordlist using KAMS-1. Our main variables support the hypotheses. We run the regression using the same regression models (OLS, fixed effect and Tobit). The relationship between the KAMS-1 and the narrative risk disclosure remains statistically significant and positive, with a coefficient of 39.14 in OLS regression. This coefficient means that additional audit risk disclosure (KAMs) disclosed in the previous fiscal year will impact the current management

risk disclosure by 39.14 Units. The results also show a coefficient of 26.14 for the fixed-effect model and 39.14 for the Tobit regression model. This means every additional KAMs topic in the previous year will result in 39.14 and 26.14 changes in the risk disclosure, respectively. These results came consistent with the previous literature (Reid et al., 2019) and the theoretical framework we developed (Egocentric theory; Grossman, L. 2018). The Going concern shows a positive coefficient 170.12, 102.01 and 170.12, which means when the auditor highlights a going concern issue, the management will react by increasing the level of risk disclosure by 170.12, 102.01 and 170.12 units. The results remain positive and significant at 99% over the three models. These are consistent with the theoretical framework (Egocentric theory; Grossman, L. 2018).

[INSERT TABLE 7 HERE]

Table 8 shows the regression results for the constructed model using risk 2 wordlists (Linsey and Shrives 2006 and updated by Elshandidy et al. 2015) when the risk is defined as both positive and negative wordlist using KAMS-1. The relationship between the KAMS-1 and the narrative risk disclosure is still statistically significant and positive at a 99% confidence level. The coefficient for OLS regression is 46.02 means every additional unit in KAMs will increase the risk disclosure by 46.02 units. The coefficient for fixed effect is 44.16 means any additional 1 KAMs will increase the risk disclosure by 44.16 units. The coefficient for the Tobit is 46.02, which means that any additional risk topic disclosed by the auditor will increase the level of risk disclosed by the management by 46.02.

[INSERT TABLE 8 HERE]

5. The Firm Market Capitalisation and the Risk Disclosure

The FTSE 100 is an index composed of the 100 largest (by Market Capitalisation) companies listed on the London Stock Exchange (LSE) (Rao et al., 2015). These are referred to as 'blue-chip' companies, and the index is seen as an indication of the performance of major companies listed in the UK (Abraham et al., 2007). We divide our sample based on the market capitalisation into two groups, FTSE 100 and non-

FTSE 100. This is to assess how KAMs could affect the management's level of corporate narrative risk disclosure when considering the listed firm rank. The table shows that the effect of the rank of the listed firm on the corporate narrative risk disclosure is always statically positively significant. The results show, both FTSE 100 and non-FTSE 100 have the same positive significant association between the risk reported by the auditor and the risk reported by the management. Our empirical results do not support our hypothesis. Although, the association between the KAMs and the risk disclosure is always positively significant and with coefficients 39.27 and 51.13 for FTSE 100 and non- FTSE 100, respectively. We also find that the relationship is not stronger in the case of FTSE 100, which contradicts what we expected. The results also suggest that the significant level is higher between the going concern and the level of risk reported by the management for the FTSE 100 firms. The coefficient is 145.3 for FTSE-100 and 176.2 for Non-FTSE 100.

[INSERT TABLE 9 HERE]

Conclusion

Because of the ISA 700 and ISA 701, the new extended audit report required the auditors to discuss any risk topic they can evaluate in their professional judgments to highlight to the stakeholders. This leads to an increase in management interest to disclose more risk information. As the management will be a threat to be caught by, the auditor has their incentive to disclose these risk topics by themselves. Egocentric bias theory suggests. Also, managers want to satisfy their ego by disclosing any subjective potential risk topics themselves, not externals. Our research shows that both KAMs and corporate narrative risk disclosure levels vary from one industry to another. This paper aims to examine the association between the level of risk disclosed by the auditor (KAMs) and the level of risk disclosed by the management. As well as examine the association between different market capitalisation (FTSE 100 and non-FTSE 100) and the level of corporate narrative risk disclosure. The paper applied to the UK FTSE All-share non-financial firms from 2013 until 2018. Our results came consistent with our hypothesis. Our results show that both risks disclosed by the auditors and management vary across the industries; some industries have a high level of risk disclosure while others have less risk disclosure.

We also found that the risk disclosed by the auditors (KAMs) are positivity and statistically associated with the level of narrative risk disclosed by the management. Our data support that firms with more KAMs tend to have a higher level of corporate narrative risk disclosure. The rank of listing and market capitalisation remains in a higher significant positive relationship between the going concern and the level of narrative risk disclosure. FTSE 100 firms have a higher significant level of going concern that contribute to the relationship between the KAMs and the level of narrative risk disclosure. Nevertheless, the relationship remains significant with non-FTSE 100 firms. We found no evidence that firms listed on FTSE 100 will have a better relationship between the KAMs and the risk narrative disclosure.

Our results will benefit the standard-setters nationally and internationally, shareholders, managers, and academics nationally and internationally. For instance, other countries might consider adopting a similar standard to ISA 700 and ISA 701 as our results suggest that this will improve the level of disclosure on the annual report and increase transparency. The national standard setter (FRC) will benefit from empirical evidence from our paper and should provide a template or explicit instruction to the auditors regards KAMs to make it consistent across different industries. Shareholders will better understand the KAMs and how it is affecting the level of risk disclosure. In addition, shareholders will determine the actual financial performance and reduce information asymmetry. Management also will be able to re-shape and reconsider how they should disclose risk-related information without being dominated by the independent auditors.

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Tables

Table 1. Variables measurements

Study variable	Explanation
Dependent variables	
Risk 1	Measured by disclosure index 1 using bag of words
Risk 2	Measured by disclosure index 2 using bag of words
Independent variables	
KAMs	Number of risk topics in the audit report.
Going concern	If going concern issue presence = 1, if absence = 0
Controls	
Firm characteristics	
Total Assets	Measure of firm size = The natural logarithm of Total assets.
Beta	Measure of the volatility and systematic risk.
Current ratio	Measure of liquidity = (current assets ÷ current liabilities)
ROE	Measure of Profitability (EBIT ÷ Equity).
Corporate governance characteristics	
Board size	Number of the board of directors
CEO duality	If the CEO same person as chairman =1, if not = 0.
Independent directors	The proportion of outside directors. (Non-executive directors ÷ number of directors) × 100 (%)
Non-audit fees	Percentage of (non-audit fees/audit fees) × 100 (%)

Table 1 contains the list and the explanation for the model's variables. EBIT: Earnings before interest and tax.

Table 2. KAMs disclosure and corporate narrative risk score across industries

	Mean KAMs	Mean Risk1	Mean Risk2
Communication Services	4.09474	474.074	838.6
Consumer Discretionary	3.10345	357.354	657.071
Consumer Staples	3.68462	421.108	738.415
Energy	4.07273	606.182	1076.073
Health Care	3.65079	489.484	877.516
Industrials	3.6178	427.471	776.539
Information Technology	2.81915	419.106	792.819
Materials	3.33987	564.344	945.708
Real Estate	2.32161	233.523	533.404
Utilities	3.91111	454.244	854.444
Total	2.32769	4446.89	8090.59

Table 2 presents descriptive statistics for the mean of KAMs, risk1 and risk2 across the industries.

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Risk1	1541	411.164	219.377	60	1260
Risk2	1540	752.688	357.259	112	2123
KAMs	1536	3.328	1.684	0	10
Going concern	1476	0.04	0.196	0	1
Ln Total assets	1474	7.289	1.594	4.17	11.764
Beta	1476	0.616	0.523	-2.551	3.979
Current ratio	1476	1.84	2.142	0	29.274
ROE	1425	18.074	32.681	-60.553	224.465
Non-audit fees %	1436	25.948	19.945	0	81
Board size	1147	8.877	2.294	3	22
CEO duality	1536	0.068	0.251	0	1
Independent directors %	1150	58.146	14.367	0	100

Table 3 presents the descriptive statistics for our model's variables. (The mean, STD, minimum and maximum).

Table 4. Correlations matrix

	KAMS	GC	TASST	Beta	Gearing	CR	ROE	NAF	BS	IND	CEO
KAMS	1										
GC	0.161*	1									
	0.000										
TASST	0.128*	0.039	1								
	0.000	0.258									
Beta	0.179*	0.259*	0.168*	1							
	0.000	0.000	0.000								
Gearing	0.131*	0.109*	-0.002	0.098*	1						
	0.000	0.000	0.978	0.000							
CR	-0.148*	0.009	-0.079*	-0.086*	-0.069*	1					
	0.000	0.741	0.001	0.001	0.008						
ROE	-0.220*	-0.057	0.001	-0.004	0.117*	-0.037	1				
	0.000	0.032	0.028	0.889	0.000	0.159					
NAF	-0.013	0.016	0.006	-0.042	0.024	0.003	0.004	1			
	0.132	0.535	0.623	0.114	0.375	0.902	0.727				
BS	0.411*	-0.004	0.352*	0.121*	-0.034	-0.132*	0.021	0.024	1		
	0.000	0.901	0.000	0.000	0.262	0.000	0.071	0.525			
IND	0.124*	0.025	0.312*	0.100*	-0.012	-0.122	0.012	-0.224	0.064*	1	
	0.000	0.306	0.000	0.002	0.678	0.728	0.787	0.000	0.031		
CEO	-0.011	-0.015	-0.032	-0.005	0.045*	0.009	0.014	0.003	-0.046	-0.160*	1
	0.135	0.559	0.165	0.849	0.088	0.741	0.660	0.915	0.120	0.000	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4 presents the correlation matrix. KAMs: Key Audit matters, GC: Going concern, TASST: Total assets, Beta, Gearing, CR: current ration, ROE: return on equity, NAF: non-audit fees, BS: board size, IND; board independent, CEO; CEO duality.

Table 5. Regression results using Risk1 wordlist (Model 1)

VARIABLES	OLS risk1	Fixed risk1	Tobit risk1
KAMS	40.101***	31.125***	40.101***
	0.003	0.0150	.0162
Going Concern	154.05***	95.10**	154.05***
	24.12	18.17	26.07
Ln Total assets	0.00400***	0.00152**	0.00365***
	0.00221	0.00164	0.00010
Beta	0.0207***	0.00276	0.0201***
	0.0122	0.0078	0.0001
Gearing	0.0276**	0.0222**	0.0231**
	0.0154	0.0106	0.0153
Current Ratio	0.0012	-0.01015	0.0010
	-2.813	-2.715	-2.821
ROE	-0.0231	-0.0188	-0.0230
	-0.0291	-0.0246	-0.0289
Non-Audit fees	-0.021***	-0.0070	-0.021***
	-0.014	-0.02	-0.012
Board Size	0.0026***	0.00151**	0.0026***
	0.02003	0.0045	0.00203
IND Board	0.083***	0.071**	0.001***
	0.006	0.001	0.003
CEO duality	-22	-21.32	-22
	-19.01	-22.27	-17.91
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Observations	1,100	1,100	1,100
R-squared	0.213	0.198	

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 5 presents the regression results for model 1

Table 6. Regression results using Risk2 wordlist (model 2)

VARIABLES	OLS risk2	Fixed risk2	Tobit risk2
KAMS	58.12***	49.70***	58.12***
	0.011	0.121	0.014
Going Concern	162.4***	100.16	162.4***
	23.01	0.271	22.16
Ln.Total Assets	0.00622***	-0.00176	0.00622***
	0.00125	0.0004	0.00140
Beta	41.26***	2.010	41.26***
	14.93	10.59	-0.8
Gearing	0.0327	0.0152	0.0333
	0.0237	0.0167	0.0235
Current Ratio	3.312	-3.447	3.312
	-4.537	-4.73	-4.502
ROE	-0.0612	-0.0812	-0.0622
	-0.0223	-0.0314	-0.0122
Non-Audit fees	-0.328*	0.0613	-0.328*
	-0.011	-0.379	-0.011
Board Size	27.90***	22.71***	27.90***
	3.215	5.512	3.822
Ind Board members	2.211***	0.228	2.211***
	-0.595	-0.798	-0.59
CEO duality	-22.26	-6.251	-22.26
	-29.37	-38.31	-29.15
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
R-squared	0.262	0.23	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6 presents the regression results for model 2.

Table 7. Regression results using Risk1 wordlist with time lag 1 year

	OLS	Fixed	Tobit
VARIABLES	risk1	risk1	risk1
KAMS -1	39.14***	26.14***	39.14***
	0.014	0.001	0.002
Going Concern	170.12***	102.01***	170.10***
	28.17	18.00	27.51
Ln. Total Assets	0.00214***	0.00112	0.00214***
	0.065	0.0028	0.003
Beta	16.21**	-8.33	16.20**
	00.85	0.102	0.72
Gearing	0.0284*	0.0222***	0.0284*
	0.004	0.0113	0.0157
Current Ratio	2.676	-3.659	2.676
	-3.112	-3.35	-3.084
ROE	-0.0433	-0.2101	-0.0332
	-0.0006	-0.0040	-0.0003
Non-Audit fees	-0.076*	-0.02	-0.076*
	-0.212	-0.27	-0.212
Board Size	20.16***	3.02	20.10***
	-0.108	-0.430	-0.108
IND board	0.222***	0.213***	0.233***
	0.102	0.501	0.004
CEO duality	-22.98	28.53	-22.98
	-21.04	-30.72	-20.85
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Observations	913	913	913
R-squared	0.266	0.21	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7 presents the regression results for model 1 with the KAMs-1

Table 8. Regression results using Risk2 wordlist with time lag 1 year

VARIABLES	Ols risk2	Fixed risk2	Tobit risk2
KAMS -1	46.02***	44.16***	46.02***
	0.219	0.213	0.219
Going Concern	188.8***	110.6***	188.2***
	0.03	0.092	0.087
Ln. Total Assets	0.00145***	0.000098	0.00145***
	0.00002	0.00032	0.00122
Beta	12.19**	-10.25	12.19**
	0.14	0.102	0.02
Gearing	0.0252	0.0216	0.0252
	0.0242	0.0172	0.024
Current Ratio	-0.00543	-3.292	-0.00543
	-4.821	-5.428	-4.779
ROE	-0.0609	-0.00564	-0.0609
	-0.0474	-0.0393	-0.047
Non-Audit fees	-0.266	-0.0658	-0.725
	-0.503	-0.438	-0.499
Board Size	22.60***	10.17	22.60***
	4.351	7.187	4.312
IND board	0.782***	0.513	0.782***
	0.658	0.928	0.652
CEO duality	-37.55	35.51	-37.55
	-12.0	-44.01	-31.22
Year Industry	Yes	Yes	Yes
Observations	913	913	913
R-squared	0.32	0.185	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8 presents the regression results for model 2 with the KAMs-1.

Table 9. Cluster analysis for FTSE 100 and Non- FTSE 100

VARIABLES	FTSE 100	Non-FTSE 100
KAMs	39.27***	51.13***
	0.099	0.223
Going concern	145.3***	176.2**
	12.002	0.776
Total asset	0.00098*	0.00107*
	0.00544	0.000612
Beta	28.20*	37.26**
	6.122	5.146
Gearing	0.0117*	0.0213
	0.00890	0.00812
Current ratio	4.125	3.312
	7.041	10.56
ROE	-0.0122	-0.0345
	0.1246	0.0001
Non-audit fees	-0.001	-0.613
	0.452	0.920
Board size	12.24*	26.01*
	1.408	5.233
Ind Board	1.476	3.333
	0.658	1.277
CEO duality	-15.00	-22.26
	34.48	49.79
Observations	289	811
R-squared	0.266	0.301

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9 presents cluster analysis for different market capitalisation: FTSE 100 and the remaining firms in FTSE all-share.

Appendices
Appendix 1: Wordlist used to measure risk1 (Ibrahim and Hussainey 2019)

Loss	Bad	Corruption
Impairment	Severity	Bribe
Exposure	Dispute	Terrorism
Failure	Crisis	Contingency
Adverse	Emission	Deficiency
Difficulty	Threat	Defect
Deficit	Deterioration	Warn
Fraud	Disaster	Flood
Accident	Harm	Insolvency
Emergency	Obsolescence	Erosion
Conflict	Shortage	Theft
Disrupt	Danger	Prosecute
Damage	Insufficiency	Crime
Unable	Non-compliance	Earthquake
Suffer	Discrimination	Collapse
Breach	Lack	Illegal
Litigation	Breakdown	Shock
Hazard	Bankruptcy	Lawsuit
Default	Fine	Catastrophe
Fire	Disappoint	Hurricane

Appendix 1 presents the keyword list used to measure the risk 1 in our research models (negative words)

Appendix 2: Wordlist used to measure risk2 (Elshandidy, et al., 2015)

Gain	Difficulty	Threat	Defect
Achievement	Deficit	Deterioration	Warn
Opportunity	Fraud	Disaster	Flood
Success	Accident	Harm	Insolvency
Potential	Emergency	Obsolescence	Erosion
Excellent	Conflict	Shortage	Theft
Prospect	Disrupt	Danger	Prosecute
Advantage	Damage	Insufficiency	Crime
Surplus	Unable	Non-compliance	Earthquake
Satisfactory	Suffer	Discrimination	Collapse
Superior	Breach	Lack	Illegal
Win	Litigation	Breakdown	Shock
Chance	Hazard	Bankruptcy	Lawsuit
Remarkable	Default	Fine	Catastrophe
Accomplish	Fire	Disappoint	Hurricane
Loss	Bad	Corruption	
Impairment	Severity	Bribe	
Exposure	Dispute	Terrorism	
Failure	Crisis	Contingency	
Adverse	Emission	Deficiency	

Appendix 2 presents the keyword list used to measure the risk 2 in our research models (positive and negative words).