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# The association between audit firm attributes and key audit matters readability

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#### Abstract

**Purpose** – This study aims to examine the relationship between the attributes of audit firms (Big 4, audit fees, busy season, audit firm tenure and audit partner gender) and the impact of these attributes on key audit matters (KAM) readability in Malaysia.

Design/methodology/approach – The auditor's reports and financial data were analysed from a sample of FTSE 100 Malaysia-listed companies for the fiscal years 2017–2019, consisting of 258 observations. Panel regression analyses were conducted to evaluate the possible associations between audit firm attributes and KAM readability. The Flesch reading ease score and Coleman–Liau index were applied to measure KAM readability. Findings – The findings show that female audit partners significantly impact KAM readability; further analysis also revealed that companies audited by Big 4 audit firms and higher audit fees tend to report a more readable KAM disclosure in the FTSE 100 in Malaysia.

Originality/value — The regression results provide empirical evidence of the influence of audit firm attributes on KAM readability. This study also examined important corporate governance players, such as external auditors and those charged with governance, who form the audit committee's qualities when analysing the determinants of KAM reporting variations in Malaysia.

**Keywords** Key audit matter, External auditor, KAM readability, Audit report, Audit firm attributes, Malaysia **Paper type** Research paper

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#### 1. Introduction

Following numerous financial scandals, a number of rules have been established to protect the public interest. The overarching goals of these are to reduce corporate fraud and implement a complete reform of company financial procedures, thus improving financial reporting transparency and disclosure (Alwardat, 2019). The implementation of International Standard of Auditing (ISA) 701 on disclosing KAM aims to enhance the communication value of the auditor's report, promote audit transparency and raise user confidence in audited financial statements (IAASB, 2013).

KAM are defined as "those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period and are selected from matters communicated with those charged with governance" (IAASB, 2015). The role of auditors is to determine KAM and form an opinion on the financial statements, consequently communicating KAM descriptions in the auditor's report. Further details on how auditors addressed the issues and why the matter was selected need to be reported in the audit (IAASB, 2015). Furthermore, the description of KAM was suggested to be more entity-specific to avoid being standardised (IAASB, 2015).

Despite the general anticipation that KAM disclosures would improve the auditors' ability to communicate important matters to users, evidence from recent research (Sirois et al., 2018; Kachelmeier et al., 2020) has been inconclusive. In certain cases, additional information may reduce readability and create negative effects for readers, leading them to seek information from other sources with which they are better acquainted (Asay et al., 2017). Therefore, the objective of the new extended audit reporting may be undermined by poor readability disclosure. According to Velte (2019), measuring the value of financial accounting and external audits in the context of diverse stakeholder groups requires ensuring that KAM disclosures are readable. KAM, which currently represents the most critical audit matters, involves complex accounting language that makes it difficult for users to understand the details. This is supported by Smith (2021), who indicated that the vocabulary used to explain KAM may be difficult to comprehend, especially for less-experienced users. Therefore, the readability of KAM disclosures is critical in uncovering the truth behind the effectiveness of KAM in improving the communication value of the auditor's report.

Smith (2021) conducted a content analysis of the new auditors' reports in the United Kingdom (UK) and discovered an increase in report readability. According to Velte (2018), the readability of KAM disclosure was greater in organisations with more women on the audit committees. Velte (2019) examined board composition as a driver of KAM disclosures, finding that audit committees with financial and industrial experience are positively connected to KAM readability. Furthermore, if KAM disclosures are based on more rules-based accounting standards, this makes them harder to read (Pinto et al., 2020). As stakeholders desire a readable audit report with no boilerplate information, insights into these characteristics are likely to provide a better understanding of how audit firms and audit partners may contribute to the readability of KAM disclosures (Velte, 2019).

Firms and auditors affect KAM throughout the audit process, but the nature and extent of this influence have not been extensively examined (Shao, 2020). Additionally, adopting the new standards enables auditors to customise audit reports with information that might improve users' comprehension of the audit process (Smith, 2021). Therefore, the diverse qualities of firms and auditors may influence KAM reporting, particularly in terms of readability. The capacity of auditors to detect and disclose financial reporting misstatements determines their quality, which thus demonstrates their ability to improve the quality of disclosure and financial reporting (DeAngelo, 1981). Companies with high-quality disclosure were shown to be linked with major audit firms (e.g. the Big Four audit firms), since the latter often adhere to tighter and more comprehensive requirements to

maintain their independence and prevent reputational damage (Kamolsakulchai, 2015). Supporting these findings, the Big Four (Big 4) were reported to positively influence KAM readability in Thailand (Wuttichindanon and Issarawornrawanich, 2020). It has also been shown that disclosing the identities of audit partners enhances auditor accountability and transparency and, therefore, the overall audit quality (Carcello and Santore, 2015).

This study extends the existing literature in two main respects. Firstly, due to the absence of previous studies on the KAM disclosures of FTSE 100-listed companies, the KAM readability trends in annual reports remain under-examined. Quality audit reports for FTSE 100 companies may act as benchmarks for other audit firms (Seebeck and Kaya, 2022). Therefore, this study aimed to ascertain the KAM readability trends within FTSE 100 companies. Second, the influence of audit firm characteristics on KAM readability in Malaysia is unknown. High-profile business failures have plagued Malaysia for the past two decades, including Transmile Group Berhad, Megan Media Holdings Berhad and the most recent 1Malaysia Development Berhad scandal. These incidents have eroded public trust in the auditor's report as an independent opinion on which stakeholders could rely to make an informed investment decision. Hence, this study investigates how audit quality attributes influence the communicative value of KAM to address this concern.

The remainder of this paper is divided as follows. Section 2 presents the literature review, while section 3 outlines the hypothesis development. The methodology is then described in section 4, before section 5 reports the data analysis for both the descriptive and multivariate regressions. Section 6 presents the additional tests. The final section contains the conclusion, including the research contributions.

#### 2. Literature review

Referring to the agency theory, KAM's objective of reducing information asymmetry by revealing entity-specific data will aid in minimising potential conflicts of interest between management and stakeholders. The inclusion of KAM in the audit report provides stakeholders with additional insight and, as a result, more assurance that the management is not only acting in their best interests. This is supported with the findings from prior researchers which reported the benefits of KAM include enhancing financial report quality (Reid *et al.*, 2019; Gold *et al.*, 2020), improving the audit quality (Li *et al.*, 2019; Kitiwong and Sarapaiyanich, 2020) and increased involvement of audit committees (Velte, 2018, 2019).

#### 2.1 KAM reporting in Malaysia

In Malaysia, the ISA 701 standard has been implemented since the financial year-end of December 15, 2016. According to a joint study by the Audit Oversight Board (AOB), Malaysian Institute of Accountants (MIA) and Association of Chartered Certified Accountants (ACCA) conducted in Malaysia, the vast majority of investors and audit committees reported that adopting KAM had provided them with more insights into the audit process and enhanced trust in the audit quality (Izma, 2018).

Previous research into KAM in Malaysia examined the first year reporting by Malaysian auditors and found revenue recognition and inventory valuation was the most reported KAM (Hashanah *et al.*, 2018). Meanwhile, Mohd Nasir (2019) exploratory investigation revealed significant differences in KAM disclosure between firms with going concern problems obtaining unqualified audit reports and those obtaining qualified reports. Abu *et al.* (2021) investigated the association between KAM disclosure and investor reactions in Malaysian publicly traded companies. Hussin *et al.* (2022) recently examined the influence of audit firm characteristics on the number of KAM. To the best of the author's knowledge, this research topic provides the first empirical data addressing the effect of audit firm attributes on KAM readability in Malaysia.

#### 2.2 KAM readability

Previous studies have used different readability measures to determine and score the difficulties of comprehending KAM disclosure. The Fog Index (FOG) is a frequently used readability metric created by Robert Gunning. It measures readability through the proportion of complex terms employed and the number of words in a sentence, which has been applied in recent KAM research (Velte, 2019; Smith, 2021). Another notable readability index used in accounting research is the Flesch reading ease score, which is derived from computational linguistics and has been widely used in prior studies to determine KAM readability (Velte, 2018, 2019; Wuttichindanon and Issarawornrawanich, 2020). Readability research has led to various formulas being created and used to measure the readability of written communications, such as auditor reports, annual reports and 10-K reports. However, regardless of the different measurements applied, a strong correlation exists between these readability metrics, so consistent results are provided in most cases (Deshmukh and Zhao, 2020).

Prior research conducted before the implementation of ISA 701 showed that auditor reports are intrinsically difficult to comprehend owing to their poor levels of readability. The introduction of KAM was intended to make the auditor's report more informative and transparent, thus potentially enhancing its readability. This was supported by Velte (2019), who found that the involvement of financial and industry experts on audit committees increased KAM readability within the audit reports of UK premium listed companies. Additionally, companies with a greater proportion of women on their audit committees produce more readable KAM disclosures, as determined by the Flesch reading ease index (Velte, 2018). Previous research in Thailand and the UK examined the Big 4 and female audit partners as determinants of KAM readability (Wuttichindanon and Issarawornrawanich, 2020; Abdelfattah et al., 2021; Smith, 2021). Therefore, this study extended the area of knowledge by including more audit firms' attributes in the analysis.

## 2.3 Audit firm attributes and KAM readability

The readability of audit reports is a linguistic characteristic that determines the quality of the financial information (Fakhfakh, 2015). The auditor's report is a tool for reducing asymmetry between the management and shareholders by summarising the auditors' opinions on the accuracy and completeness of the information given. However, previous studies have criticised the standardised and generic format of the auditor's report. Therefore, regulators mandated that KAM disclosures should be intended to offer the audit report users additional client-specific information from the auditor's viewpoint.

The notion of information asymmetry refers to the claim that in agency interactions, one party often has more or better knowledge than the other, which they may utilise to take advantage of their less-informed counterparts (Habib *et al.*, 2019). Auditors should function as a monitoring tool in this situation, aiding shareholders in their decision-making by addressing the asymmetric information issue created by inter-agency conflict (Sangchan *et al.*, 2020). Thus, the information contained in audit reports created by reputable auditors is considered more reliable and credible than the information included in audit reports provided by less reputable auditors, thereby decreasing information asymmetries within internal reporting (Farooq and Tabine, 2015). Therefore, aligning with the agency's theory, audit firms with high-quality attributes have the capacity to reduce information asymmetry in the auditor's report by providing a more readable KAM.

#### 3. Hypothesis development

#### 3.1 Big 4 and KAM readability

For the auditor's report to be useful in decision making, the facts must be presented clearly and succinctly (IAASB, 2018). Therefore, if the auditor's report is not readable by the readers of financial statements, it is rendered useless (Pinto *et al.*, 2020). Inconsistent results have been

yielded by the few studies to have examined the correlation between audit firm size and the readability of auditors' written communications. Recently, through the use of Flesch reading ease scores, the Big 4 audit firms were found to be significantly and positively correlated with KAM readability in Thailand (Wuttichindanon and Issarawornrawanich, 2020). Using the same measurement, similar findings also indicated that corporations audited by the Big 4 in the United Kingdom had more readable KAM disclosures (Velte, 2018). Smith (2021) found that due to the implementation of ISA 700 in the United Kingdom, the Big 4 audit firms generated audit reports that were more readable and communicated more entity-specific financial risk than other audit firms. However, conflicting results were reported by Deshmukh and Zhao (2020), where the Big 4 were closely connected with difficult-to-read annual reports as a result of their clients' complex financial operations which requires lengthy disclosures and highly technical descriptions. The current research presents the following hypothesis based on the recent data.

H1. There is a positive relationship between a company audited by a Big 4 firm and KAM readability.

# 3.2 Audit fees and KAM readability

Evidence indicates a positive relationship between audit fees and audit effort (Rice and Weber, 2012); consequently, the authors predicted that audit fees would represent auditors' efforts in disclosing KAM, and this might impact the readability. This is supported by findings that suggest audit fees are positively and significantly related to audit proposal readability, as measured by the Flesch reading ease scores (Chang and Stone, 2019). Additionally, Abdelfattah et al. (2021) reported a consistently significant and positive association between audit fees and extended audit reporting, using a sample of UK companies. However, a recent investigation demonstrated that lower annual report readability was linked to higher audit fees for the US auditors on Form 10-K, implying that auditors spend more time examining clients when their annual reports are less readable (Blanco et al., 2021). This might be the case where greater effort is needed to audit a larger company with more complex business transactions and segments. As such, the following hypothesis was developed:

H2. There is a positive relationship between audit fees and KAM readability.

#### 3.3 Audit firms' busy season and KAM readability

In accordance with the view of Gul *et al.* (2017), audit partners with severe workloads are prone to compromise on evidence-gathering obligations towards audit completion due to the limited timeframe and high-pressure workload, resulting in poor-quality audit output. Similarly, Heo *et al.* (2021) found that audit firms tend to restrict the participation of senior auditors during busy audit seasons, which is associated with low audit quality. Previous research varies in terms of identifying the impact of the busy season and audit report readability. A positive association was found, as measured by the Flesch reading ease index, although a negative association was reported when using the Fog Index (Salehi *et al.*, 2022). More recently, a positive relationship was found between the busy season and extended auditor report readability in the UK (Seebeck and Kaya, 2022). As such, the following hypothesis was developed:

H3. There is a negative relationship between the audit firms' busy season and KAM readability.

#### 3.4 Audit firm tenure and KAM readability

According to the agency theory, audit tenure may be positively correlated with auditor competence, whereby auditors understand internal corporate controls, accounting information systems and company-specific risks (Fitriany *et al.*, 2019). According to

Lennox and Wu (2018), a lengthy tenure may result in a high-quality audit since a partner can progressively gain more client- and industry-specific knowledge. Regarding KAM, organisations with over four years of audit tenure often provide KAM of greater quantity and length, as well as being industry-specific KAM (Shao, 2020). Hence, longer audit periods might be advantageous for partners in disclosing a more readable KAM due to the progressive accumulation of knowledge, particularly of the client's entity-specific matters. However, the partner's continuous involvement with the same client may provide a familiarity threat. As audit firm tenure increases, the familiarity threat may pose a negative effect as partners reveal fewer KAM, and the auditor's report becomes less transparent (Hussin *et al.*, 2022). Thus, the following hypothesis was proposed:

H4. There is a positive relationship between audit firm tenure and KAM readability.

## 3.5 Audit partner gender and KAM readability

The involvement of female directors was found to improve the readability of annual reports in organisations with minimal boardroom links (Ginesti *et al.*, 2018). These findings resembled those of Velte (2018), who identified how corporations with more women represented on their audit committees provided KAM disclosures with better readability. In support of this, Wuttichindanon and Issarawornrawanich (2020) observed that having female external auditors improved KAM readability. According to the existing findings, female audit partners evaluate and report more potential risks than their male equivalents, corroborating earlier evidence from audit partner studies that established a gender effect (Garcia-Blandon *et al.*, 2019). However, other findings contradict this, claiming that female audit partners tended to report lengthy KAM disclosures that are excessively comprehensive for readers to understand easily, reducing the audit reports readability (Abdelfattah *et al.*, 2021). Hence, the fifth hypothesis is as follows:

H5. There is a positive relationship between the audit partner's gender (female) and KAM readability.

# 4. Methodology

#### 4.1 Sample and data collection

Companies listed in the top 100 FTSE Bursa Malaysia Index (including the FTSE Bursa Malaysia KLCI and the Mid 70 FTSE Bursa Malaysia Index) that reported financial information between 2017 and 2019 were included in the present study sample. This index was chosen since the companies accounted for 79% of the total market capitalisation. Following the adoption of ISA 701 on December 15, 2016, annual report data from 2017 through 2019 were used for this study. It was regarded as appropriate to use a sample consisting of the same companies examined by the same audit firm and audit partners' gender to assess the impact of the audit firm attributes over the duration of the research. After excluding companies with data unavailability over the three-year study, the final research sample included 86 companies from various sectors and sizes.

# 4.2 KAM readability

KAM information was obtained from the auditor's reports, which were downloaded as PDFs from the company websites. These were converted to Word documents. The readability data were acquired by running the software programmes on the KAM included in the annual auditor's reports within the sample. The entire narrative was utilised to determine the study's KAM readability score. Consistent with prior research, the readability scores were constructed using a computer software tool (Abdelfattah *et al.*, 2021; Smith, 2021).

328

The dependent variable of KAM readability (KAMRead) was measured through the Flesch reading ease index used in previous research (Velte, 2018, 2019; Wuttichindanon and Issarawornrawanich, 2020). This index is calculated based on the average sentence length (measured by the number of words) and the average number of syllables per word. The Flesch reading ease index was transformed into KAM readability (KAMRead) scores as shown in Table 1 (available in supplementary material to article). The higher the Flesch reading ease index and score, the easier a text is to read.

## 4.3 Audit firm attributes and control variables

The independent variables were the main audit firm attributes; these included Big 4 (BIG4), audit fees (FEES), busy season (BUSY), audit firm tenure (TENURE) and female partner (FEMALE). Table 2 (available in supplementary material to article) provides a detailed description of the research variables. Following the work of other researchers, the firm-related control variables included the company profitability (PROFIT), leverage (LEVERAGE) and totals sales (SALES). Research demonstrates that larger, more leveraged and loss-making firms are more likely to report their finances more aggressively and to feature more KAM (Pinto and Morais, 2018; Sierra-García et al., 2019). This study also controlled for the audit committee-related variables used by prior studies, which included the audit committee size (ACSize) and the frequency of audit committee meetings (ACMeet). Data on the audit firm attributes and control variables were collected from the corporate annual reports and the corporations' websites. Finally, the financial data were extracted from the Thomson Reuters DataStream database.

Presented below is the empirical model formula through which the study objective was to be attained: to investigate the impact of audit firm attributes on the readability of KAM. The regression model is as follows:

$$KAMREAD_{it} = \beta_{0+}\beta_{1}BIG4 + \beta_{2}FEES + \beta_{3}BUSY + \beta_{4}TENURE + \beta_{5}FEMALE$$
  
  $+ \beta_{6}PROFIT + \beta_{7}LEVERAGE + \beta_{8}SALES + \beta_{9}ACMEET$   
  $+ \beta_{10}ACSIZE + \theta_{1-v}Industry\ effects + \theta_{1-v}Year\ effects + \varepsilon_{it}$ 

#### 5. Results

#### 5.1 Trends in KAM readability

A wide range of values were obtained for KAM readability, as measured by the Flesch reading ease index and as reflected in the company reports between 2017 and 2019; these are outlined in Boxplot Graph 1 (available in supplementary material to article). Overall, the values for the companies audited by the Big 4 ranged between 10.8 and 50, with a 3-year average of 31.52; the indexes ranged between 11.4 and 44.3, with a 3-year average of 28.21, for the companies not audited by the Big 4. The Big 4-audited companies reported a trend of better readability than the non-Big 4. However, the former companies also tended to report the lowest indexes within the KAM readability trends in the Bursa Malaysia FTSE 100 companies. This suggests that higher-quality audits may need more disclosures and explanations, resulting in more complicated annual reports (Deshmukh and Zhao, 2020).

Graph 2 (available in supplementary material to article) illustrates the mean of the KAM readability index reported across different industries during the research period (2017–2019). The basic materials industry reported the highest mean readability index of 38.62, indicating they provided the most readable KAM in Malaysia, followed by consumer services at 35.89

and utilities at 32.36. In comparison, industrial companies were responsible for the lowest index of 26.56, indicating a very difficult to read KAM, followed by telecommunications at 27.03 and technology at 28.42.

## 5.2 Descriptive analysis

It can be observed from the descriptive statistics of the variables (not tabulated) in the model that the average KAM readability score, based on the transformed value of the Flesch reading ease score, is 1.57, indicating a very difficult-to-read disclosure. There are 68 FTSE 100 companies that had engaged top-ranking auditors from the Big 4 audit firms, similar to the score of 79.31%. The average duration of audit firms (staying with the same company) was 10 years, with a maximum tenure of 16 years and a minimum tenure of one year. The average number of companies audited by a female partner is about 18.6%, only 12 out of the total of 86 companies, the majority of which were from the consumer services and healthcare industries. Companies with missing values for any of the aforementioned research variables were omitted. All the continuous variables were winsorised at 1% (top and bottom) to alleviate any outlier impacts.

#### 5.3 Pearson correlation matrix

Based on Table 3 (available in supplementary material to article), no multicollinearity issues were demonstrated between the independent variables, according to the Pearson correlation indicators. The highest correlation was between audit fees and total sales, at 0.481, while the correlations with other explanatory variables fell below 0.481. For this model analysis, the mean variance inflation factor (VIF) (not tabulated) was 1.285. Thus, it is based on the correlation matrix and VIF of the research variables, implying no multicollinearity issues in the model.

#### 5.4 Multivariate regression analysis

Table 4 (available in supplementary material to article) summarises the findings from the multivariate panel regression analyses. The random effect model was selected after undertaking the Hausman test. The result of p-value > 0.05 indicated the random effect model was the most suitable. Additionally, to generate consistent estimates of the unknown errors, a robust estimator was performed when analysing this model.

The R-square  $(R^2)$  value of 17.7% is higher from the result of KAM readability analysis in Thailand (11.5%), which used the same measurement for the dependent variable (Wuttichindanon and Issarawornrawanich, 2020). The multivariate regression results show that neither the BIG4, FEES, BUSY, nor TENURE variables influenced KAMREAD; thus, H1, H2, H3 and H4 were not supported. This may be due to the introduction of ISA 700, after which the auditor reports became much longer (Gutierrez et al., 2018) and, regardless of the audit firm attributes, the KAM readability scores were not significantly different, with a minimum score of 1 (very difficult to read) and a maximum score of 2 (difficult to read). However, the presence of FEMALE (H5) tended to have a positive and significant correlation with KAMREAD at p < 0.10, which illustrates that FEMALE tend to report more readable KAM disclosures compared to male partners. This can be demonstrated by the fact that the three most readable KAM were derived from industries in which the majority of companies were audited by female partners; consumer services and healthcare. This is consistent with Wuttichindanon and Issarawornrawanich (2020), who found that when external auditors were women, the KAMREAD improved using the same readability measurement. However, the current findings are inconsistent with other researchers (Abdelfattah et al., 2021), who found that the KAMREAD was lower for firms audited by a female partner. However, this study adopted the Fog Index, a dissimilar readability metric.

Regarding the influence of firm-related control variables, PROFIT was negatively correlated with KAMREAD, at p < 0.05. The findings also revealed a positive association between SALES and KAMREAD, which is consistent with past studies (Velte, 2018, 2019). In contrast, a negative relationship was discovered between LEVERAGE and KAMREAD. This was similar to Wuttichindanon and Issarawornrawanich (2020), who stated that as a consequence of debt covenants and/or going concern issues, companies with greater leverage ratios may incur poorer readability scores because of the legal jargon used and the length of the explanations provided.

In addition, with regard to the audit committee variables, that of ACMEET was positively related to KAMREAD, at p < 0.01. This is consistent with the findings of Bryce *et al.* (2015) that regular ACMEET may improve information communication within a company. Meanwhile, ACSIZE were found to be positively correlated with KAMREAD.

## 6. Additional analysis

The dependent variable was modified using another proxy to measure readability known as the Coleman–Liau index (CLI) to obtain a more robust result, as shown in Table 5 (available in supplementary material to article). The CLI measures the readability of a text in terms of the average number of characters and sentences per hundred words (Coleman, 1975). A lower index indicates that the KAM disclosures are more readable. CLI was recently used by researcher in determining the readability of the annual report (Nilipour *et al.*, 2020).

In Table 5, the  $R^2$  value increased to 27.7%. The robustness test results supported hypotheses 1 and 2 in that BIG4 and FEES are positively associated with KAMREAD at p < 0.10 and p < 0.05, respectively. Thus, in line with agency theory, companies audited by a Big 4 with higher audit fees resulted in increased KAMREAD. Interestingly, a negative relationship existed between FEMALE and KAMREAD at p < 0.10, indicating a female partner presence tends to reduce KAMREAD using CLI.

#### 7. Conclusion

The objectives of the present study are to (1) examine the trends of KAM reporting in Malaysia and (2) investigate the influence of audit firm attributes on the readability of KAM disclosure. This study extended the KAM readability research by Velte (2018, 2019), investigating the influence of the audit committee's characters on KAM readability. In addition, this research also complements the evidence on the determinants of KAM readability (Wuttichindanon and Issarawornrawanich, 2020; Abdelfattah *et al.*, 2021; Smith, 2021).

Regarding KAM readability patterns, the mean indexes for the three-year research period decreased slightly, from 30.84 in 2017 to 30.45 in 2018, then increased to 31.17 in 2019. The Flesch reading ease scores indicate that KAM reported by the FTSE 100 companies in Malaysia are difficult to read. Further analysis showed that Big 4 KAM reporting is more readable than non-Big 4 reports. Furthermore, the basic materials sector signifies the most readable KAM in contrast to industrial companies, which reported the least readable KAM.

The significant audit firm's traits influencing KAM readability in Malaysia include Big 4, audit fees and female partners. The result reaffirms the influencing role of Big 4 in enhancing KAM readability across Southeast Asia, consistent with a study in Thailand (Wuttichindanon and Issarawornrawanich, 2020) and the UK settings (Velte, 2018, 2019).

Surprisingly, the association between female audit partners and KAM readability is inconsistent based on different readability metrics. Similar to previous studies, a positive association was found using Flesch reading ease scores (Wuttichindanon and Issarawornrawanich, 2020). However, a negative association was discovered using CLI, which was consistent with the finding by Abdelfattah et al. (2021). These findings support the hypothesis that gender differences in risk evaluation and reporting style significantly affect KAM readability. Furthermore, following the agency-theoretic framework, there is also evidence that companies with more audit committee meetings produce more readable KAM.

This study contributes significantly to the current body of knowledge which provides the first evidence of the effect of audit firm attributes on KAM readability using the Coleman—Liau index. Specifically, it demonstrates that Big 4 and high audit fees have a strong positive impact on KAM. Hence, engaging a reputable audit firm reduces information asymmetry and improves the communicative value of the auditor's report.

#### References

- Abdelfattah, T., Elmahgoub, M. and Elamer, A.A. (2021), "Female audit partners and extended audit reporting: UK evidence", *Journal of Business Ethics*, Vol. 174 No. 1, pp. 177-197.
- Abu, N.A., Jaffar, R. and Rahmat, M.M. (2021), "Key audit matters and investors' reactions", Management and Accounting Review (MAR), Vol. 20 No. 3, pp. 159-185.
- Alwardat, Y. (2019), "Disclosure quality and its impact on financial reporting quality, audit quality, and investors' perceptions of the quality of financial reporting: a literature review", *Accounting and Finance Research*, Vol. 8 No. 3, pp. 201-218.
- Asay, H.S., Elliott, W.B. and Rennekamp, K. (2017), "Disclosure readability and the sensitivity of investors' valuation judgments to outside information", Accounting Review, Vol. 92 No. 4, pp. 1-25.
- Blanco, B., Coram, P., Dhole, S. and Kent, P. (2021), "How do auditors respond to low annual report readability?", *Journal of Accounting and Public Policy*, Vol. 40 No. 3, pp. 1-14.
- Bryce, M., Ali, M.J. and Mather, P.R. (2015), "Accounting quality in the pre-/post-IFRS adoption periods and the impact on audit committee effectiveness evidence from Australia", *Pacific Basin Finance Journal*, Vol. 35, pp. 163-181.
- Carcello, J.V. and Santore, R. (2015), "Engagement partner identification: a theoretical analysis", Accounting Horizons, Vol. 29 No. 2, pp. 297-311.
- Chang, Y.-T. and Stone, D.N. (2019), "Proposal readability, audit firm size and engagement success: do more readable proposals win governmental audit engagements?", *Managerial Auditing Journal*, Vol. 34 No. 8, pp. 871-894.
- Coleman, M. (1975), "A computer readability formula designed for machine scoring", Journal of Applied Psychology, Vol. 60 No. 2, pp. 283-284.
- DeAngelo, L.E. (1981), "Auditor size and audit fees", *Journal of Accounting and Economics*, Vol. 3 No. 3, pp. 183-199.
- Deshmukh, A. and Zhao, X. (2020), "Audit quality and readability of the annual reports", *International Journal of Strategic Decision Sciences*, Vol. 11 No. 1, pp. 76-90.
- Fakhfakh, M. (2015), "The readability of international illustration of auditor's report: an advanced reflection on the compromise between normative principles and linguistic requirements", *Journal of Economics, Finance and Administrative Science*, Vol. 20 No. 38, pp. 21-29.
- Farooq, O. and Tabine, S. (2015), "Agency problems and the choice of auditors: evidence from the MENA region", Review of Middle East Economics and Finance, Vol. 11 No. 1, pp. 79-97.
- Fitriany, F., Utama, S., Rossieta, H. and Martani, D. (2019), "Analysis of mandatory audit rotation regulations in Indonesia", Advances in Economics, Business and Management Research, Vol. 89 Apbec, 2018, pp. 460-471.

- Garcia-Blandon, J., Argilés-Bosch, J.M. and Ravenda, D. (2019), "Is there a gender effect on the quality of audit services?", *Journal of Business Research*, Vol. 96, November, 2018, pp. 238-249.
- Ginesti, G., et al. (2018), "Female board participation and annual report readability in firms with boardroom connections", Gender in Management, Vol. 33 No. 4, pp. 296-314.
- Gold, A., Heilmann, M., Pott, C. and Rematzki, J. (2020), "Do key audit matters impact financial reporting behavior?", *International Journal of Auditing*, Vol. 24 No. 2, pp. 232-244.
- Gul, F.A., Lai, K.M.Y. and Ma, S.M. (2017), "Busy auditors, partner-client tenure, and audit quality: evidence from an emerging market", Journal of International Accounting Research, Vol. 16 No. 1, pp. 83-105.
- Gutierrez, E., Minutti-Meza, M., Tatum, K.W. and Vulcheva, M. (2018), "Consequences of adopting an expanded auditor's report in the United Kingdom", *Review of Accounting Studies*, Vol. 23 No. 4, pp. 1543-1587.
- Habib, A., Wu, J., Bhuiyan, M.B.U. and Sun, X. (2019), "Determinants of auditor choice: review of the empirical literature", *International Journal of Auditing*, Vol. 23 No. 2, pp. 308-335.
- Hashanah, I., Asna, A.A. and Hamimah, H. (2018), "First time reporting of key audit matters (KAM) by Malaysian auditors", *International Journal of Engineering and Technology*, Vol. 7, pp. 30-32.
- Heo, J.S., Kwon, S.Y. and Tan, H.T. (2021), "Auditors' responses to workload imbalance and the impact on audit quality\*", *Contemporary Accounting Research*, Vol. 38 No. 1, pp. 338-375.
- Hussin, N., Salleh, M.F.M., Ahmad, A. and Rahmat, M.M. (2022), "The influence of audit firm attributes on KAM disclosures in FTSE100 in Malaysia", *Management and Accounting Review (MAR)*, Vol. 21 No. 2, pp. 239-262.
- IAASB (2013), "Reporting on audited financial statements: proposed new and revised international standards on auditing", *Exposure Draft*, pp. 1-42, available at: http://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international
- IAASB (2015), "International Standards on Auditing 701: Communicating Key Audit Matters in the Independent Auditor's Report", Vol. 1 April, pp. 1023-1046, Ifac, available at: https://www.iaasb.org/publications/international-standard-auditing-isa-701-new-communicating-key-audit-matters-independent-auditors-4
- IAASB (2018), Handbook of International Quality Control, Auditing Review, Other Assurance, and Related Services Pronouncements, Ifac, Vol. 1, pp. 1-1153, available at: https://www.iaasb.org/publications/2018-handbook-international-quality-control-auditing-review-other-assurance-and-related-services-26
- Izma, N. (2018), "Enhanced auditors' report driving better governance, accountant's today", available at: https://www.at-mia.my/2018/01/01/enhanced-auditors-report-driving-better-governance/? s=governance
- Kachelmeier, S.J., Rimkus, D., Schmidt, J.J. and Valentine, K. (2020), "The forewarning effect of critical audit matter disclosures involving measurement uncertainty", Contemporary Accounting Research, pp. 1-27.
- Kamolsakulchai, M. (2015), "The impact of the audit committee effectiveness and audit quality on financial reporting quality of listed company in stocks exchange of Thailand", *Business and Economic Research Online*, Vol. 4 No. 2, pp. 2304-1013.
- Kitiwong, W. and Sarapaivanich, N. (2020), "Consequences of the implementation of expanded audit reports with key audit matters (KAMs) on audit quality", Managerial Auditing Journal, Vol. 35 No. 8, pp. 1095-1119.
- Lennox, C.S. and Wu, X. (2018), "A review of the archival literature on audit partners", Accounting Horizons, Vol. 32 No. 2, pp. 1-35.
- Li, H., Hay, D. and Lau, D. (2019), "Assessing the impact of the new auditor's report", Pacific Accounting Review, Vol. 31 No. 1, pp. 110-132.
- Mohd Nasir, A.H. (2019), "Laporan Audit Luaran di Malaysia: analisis Eksploratori Perkara Utama Audit", Asian Journal of Accounting and Governance, Vol. 2, pp. 163-170.

Audit firm

attributes and

- Nilipour, A., De Silva, T.A. and Li, X. (2020), "The readability of sustainability reporting in New Zealand over time", *Australasian Accounting, Business and Finance Journal*, Vol. 14 No. 3, pp. 86-107.
- Pinto, I. and Morais, A.I. (2018), "What matters in disclosures of key audit matters: evidence from Europe", Journal of International Financial Management and Accounting, Vol. 30 No. 2, pp. 145-162.
- Pinto, I., Morais, A.I. and Quick, R. (2020), "The impact of the precision of accounting standards on the expanded auditor's report in the European Union", *Journal of International Accounting*, *Auditing and Taxation*, Vol. 40, pp. 1-18.
- Reid, L.C., Carcello, J.V., Li, C., Neal, T.L. and Francis, J.R. (2019), "Impact of auditor report changes on financial reporting quality and audit costs: evidence from the United Kingdom", *Contemporary Accounting Research*, Vol. 36 No. 3, pp. 1501-1539.
- Rice, S.C. and Weber, D.P. (2012), "How effective is internal control reporting under SOX 404? Determinants of the (Non-)Disclosure of existing material weaknesses", *Journal of Accounting Research*, Vol. 50 No. 3, pp. 811-843.
- Salehi, M., Zimon, G. and Seifzadeh, M. (2022), "The effect of management characteristics on audit report readability", *Economies*, Vol. 10 No. 12, pp. 1-23.
- Sangchan, P., Habib, A., Jiang, H. and Bhuiyan, M.B.U. (2020), "Fair value exposure, changes in fair value and audit fees: evidence from the Australian real estate industry", *Australian Accounting Review*, Vol. 30 No. 2, pp. 123-143.
- Seebeck, A. and Kaya, D. (2022), "The power of words: an empirical analysis of the communicative value of extended auditor reports", European Accounting Review, doi: 10.1080/09638180.2021.2021097.
- Shao, X. (2020), "Research on disclosure status and influencing factors of key audit matters", Modern Economy, Vol. 11 No. 03, pp. 701-725.
- Sierra-García, L., Gambetta, N., García-Benau, M.A. and Orta-Pérez, M. (2019), "Understanding the determinants of the magnitude of entity-level risk and account-level risk key audit matters: the case of the United Kingdom", *British Accounting Review*, Vol. 51 No. 3, pp. 227-240.
- Sirois, L.-P., Bbdard, J. and Bera, P. (2018), "The informational value of key audit matters in the auditor's report: evidence from an eye-tracking study", Accounting Horizons, Vol. 32 No. 2, pp. 141-162.
- Smith, K. (2021), "Tell me more: a content analysis of expanded auditor reporting in the United Kingdom". doi: 10.2139/ssrn.2821399.
- Velte, P. (2018), "Does gender diversity in the audit committee influence key audit matters' readability in the audit report? UK evidence", Corporate Social Responsibility and Environmental Management, Vol. 25 No. 5, pp. 748-755.
- Velte, P. (2019), "Associations between the financial and industry expertise of audit committee members and key audit matters within related audit reports", Journal of Applied Accounting Research, Vol. 21 No. 1, pp. 185-200.
- Wuttichindanon, S. and Issarawornrawanich, P. (2020), "Determining factors of key audit matter disclosure in Thailand", *Pacific Accounting Review*, Vol. 32 No. 4, pp. 563-584.

#### Supplementary material

The supplementary material for this article can be found online.

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