# The Impact of Audit Committee Characteristics on the Number, Readability, and Tone of Key Audit Matters in the Audit Report

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**Abstract:** The objective of the present study was to examine the impact of audit committee characteristics on the number, readability, and tone of Key Audit Matters (KAMs) disclosed in the independent auditors' reports of companies listed on the Tehran Stock Exchange. Audit committee characteristics included audit committee size, independence, financial expertise, gender diversity, experience, tenure, multiple directorships, overlapping memberships, and professional reputation. In terms of purpose, this study was applied research, and in terms of methodology, it employed a descriptive-correlational design based on ex post facto data. The statistical population consisted of companies listed on the Tehran Stock Exchange during the five fiscal years from 2020/2021 to 2024/2025. After applying the screening criteria, 114 companies and 570 firm-year observations were selected. The research data were collected from audit reports, financial statements, accompanying notes, information disclosed through the CODAL system, and Rahavard Novin software. Multiple regression models were estimated using EViews software to test the research hypotheses. The results indicate that certain audit committee characteristics can affect various dimensions of Key Audit Matter reporting. In particular, the professional and structural characteristics of audit committees play an important role in improving the quality of audit report content, enhancing readability, and moderating reporting tone. The findings suggest that strengthening audit committee effectiveness can contribute to greater transparency in auditors' reports, reduced information asymmetry, and improved monitoring effectiveness within the corporate governance system.

**Keywords:** Audit committee, Key Audit Matters, audit report readability, reporting tone, independent auditor's report.

## 1. Introduction

The independent auditor's report is a central communication mechanism through which auditors convey the outcomes of the audit process to shareholders, investors, creditors, regulators, and other users of financial statements. Traditionally, however, standardized audit reports were often criticized for providing limited entity-specific information and for failing to communicate adequately the most significant matters encountered during the audit. The introduction of Key Audit Matters (KAMs) into expanded auditor reporting was intended to address this limitation by increasing the informational value, transparency, and communicative usefulness of audit reports. KAMs draw users' attention to matters that, in the auditor's professional judgment, were of most significance in the audit of the current-period financial statements. Accordingly, the KAM section has transformed the auditor's

report from a largely standardized document into a more informative narrative disclosure containing firm-specific and engagement-specific information [1, 2].

The informational relevance of KAM disclosure arises from its potential to reduce the information gap between auditors and financial statement users. Because external users do not directly observe the audit process, KAMs can provide insights into complex accounting estimates, areas involving significant management judgment, material risks, unusual transactions, and other issues that required substantial auditor attention. Earlier evidence concerning audit-report disclosures also indicates that narrative information contained in audit reports may reveal economically meaningful signals about firms' conditions and future prospects [3]. Consequently, KAM reporting can be viewed not merely as an additional compliance requirement but as a mechanism for enhancing the transparency of the audit process and improving the quality of communication between auditors and stakeholders.

The growing academic literature on KAMs has therefore examined both their determinants and their consequences. Research has investigated whether KAM disclosures influence investors' judgments, analyst forecasts, audit fees, audit delay, earnings-related uncertainty, and market perceptions. For example, evidence from the Iranian capital market suggests that KAM disclosure may be associated with investor judgment and decision-making and may influence investor sentiment toward listed companies [4, 5]. Other evidence indicates that KAM disclosure is related to earnings ambiguity, reflecting the possibility that KAMs communicate information about areas of greater accounting complexity or uncertainty [6]. In addition, KAM disclosure may be associated with audit pricing and the timing of audit report issuance, because identifying, documenting, and communicating significant audit matters may increase the complexity and effort required during the audit engagement [7].

Although early KAM research concentrated largely on the number and categories of matters disclosed, more recent studies have emphasized that the quality of KAM communication cannot be evaluated solely by counting disclosures. KAM sections are narrative texts, and their usefulness depends on both the substantive information they contain and the way that information is communicated. Therefore, characteristics such as readability, linguistic complexity, specificity, tone, and informative value have become increasingly important dimensions of KAM research. Systematic reviews of the literature show a gradual shift from examining whether auditors disclose KAMs toward investigating how auditors formulate these disclosures and whether textual characteristics affect users' interpretation of the audit report [1, 2].

Readability is particularly important because the benefits of enhanced auditor reporting may be weakened when KAM descriptions are excessively complex, technical, lengthy, or difficult to understand. A KAM disclosure may contain relevant information, but its usefulness to investors and other nonprofessional users can decline if the narrative imposes excessive processing costs. Empirical evidence indicates that readability has meaningful economic consequences. In an emerging-market setting, greater readability of KAM disclosures has been associated with improved analyst forecast precision, suggesting that clearer language enhances the capacity of sophisticated users to extract decision-relevant information from auditor reports [8]. Similarly, evidence on the informative value of KAM narratives suggests that readability is an integral dimension of audit-report communication quality rather than merely a stylistic characteristic [9].

The linguistic characteristics of KAMs can also vary systematically across audit engagements. Research from European markets demonstrates that the language used in KAM disclosures is influenced by firm-, auditor-, and engagement-related factors, implying that textual complexity is not randomly distributed across reports [10]. More recent research using artificial intelligence and textual analysis has further shown that KAM narratives contain informational content that can be extracted from linguistic patterns beyond conventional numerical measures of

disclosure [11]. These developments emphasize the importance of treating readability and other textual properties as substantive outcomes that reflect the quality of auditor communication.

Another increasingly important dimension of auditor reporting is tone. Tone reflects the positive, negative, cautious, uncertain, or risk-oriented wording embedded in narrative disclosures. Because auditors communicate professional judgments concerning areas of significant audit attention, the tone of KAMs may influence how users perceive the severity, uncertainty, and risk implications of the matters reported. Recent evidence shows that users respond to auditors' tone and that linguistic framing can shape perceptions of audit-report information [12]. Therefore, investigating audit reporting tone provides a more nuanced understanding of how auditors communicate significant matters, beyond examining only whether a KAM is disclosed.

The number, readability, and tone of KAMs may be influenced by several governance mechanisms, among which the audit committee is particularly important. The audit committee occupies a central position in the corporate governance framework because it monitors financial reporting, internal controls, risk management, and the external audit process. It also serves as an important communication channel between the board of directors, management, internal auditors, and external auditors. Through its oversight responsibilities, the audit committee may influence both the issues receiving substantial audit attention and the manner in which those issues are discussed in the auditor's report. The relationship between audit committee effectiveness and external audit outcomes has long been recognized, and audit committee members' experience has been associated with higher audit quality [13].

Theoretical arguments based on agency theory suggest that an effective audit committee can reduce information asymmetry and managerial opportunism by strengthening oversight over financial reporting and the audit process. Under this perspective, audit committees with stronger structural and professional characteristics should enhance communication with external auditors and facilitate more effective scrutiny of areas involving significant accounting judgment. However, the effect of audit committee characteristics on KAM reporting is not necessarily uniform. Some characteristics may increase the number of reported KAMs by promoting greater scrutiny and transparency, whereas others may improve the resolution of contentious issues before completion of the audit, thereby reducing the number of matters ultimately communicated. Audit committee characteristics may also affect the clarity and tone of KAM narratives by influencing auditor-management dialogue and the quality of governance surrounding financial reporting.

Audit committee size is one structural feature that may shape its monitoring capacity. Larger committees may possess broader knowledge, experience, and professional resources, potentially enhancing their ability to identify and discuss financial reporting risks. At the same time, excessively large committees may encounter coordination problems, reduced individual accountability, or slower decision-making. Consequently, the relationship between audit committee size and KAM disclosure may depend on whether the benefits of expanded expertise outweigh potential coordination costs. Evidence from emerging economies indicates that board and audit-related governance characteristics can significantly shape the extent and content of KAM disclosures [14].

Audit committee independence represents another central governance characteristic. Independent members are expected to exercise more objective oversight because they are less closely aligned with executive management. Greater independence may improve monitoring effectiveness, strengthen auditor independence, and increase the credibility of financial reporting. In the Iranian context, audit committee independence has also been examined as a governance factor capable of modifying the relationship between corporate characteristics and external audit

outcomes [15]. Accordingly, independent audit committees may affect auditors' willingness to communicate significant matters and may also influence the quality and neutrality of KAM descriptions.

Financial expertise is particularly relevant because KAMs commonly involve technically complex accounting estimates, financial instruments, revenue recognition, impairment, provisions, going-concern assessments, and other areas requiring specialized financial knowledge. Audit committee members with accounting and financial expertise should be better able to evaluate management judgments, engage in substantive discussions with auditors, and understand the implications of audit findings. Empirical evidence confirms that audit committee expertise affects external auditors' KAM disclosures [16]. Research also indicates that specific accounting experience among audit committee members is associated with the types of KAMs communicated, demonstrating that professional background can shape the content of expanded auditor reporting [17].

Experience may complement formal expertise by improving members' familiarity with audit procedures, reporting risks, and interactions with external auditors. Audit committee members with prior committee service may have greater capacity to identify recurring financial reporting problems and challenge management effectively. Such experience has been linked to audit quality more generally [13], suggesting that it may also influence the content and presentation of KAMs. Likewise, committee tenure may produce both benefits and costs. Longer tenure can increase firm-specific knowledge, improve communication efficiency, and deepen understanding of the company's business model and reporting risks. Conversely, excessive tenure may reduce independence or encourage familiarity with management. Similar trade-offs have been documented in the broader KAM literature, where tenure-related factors interact with institutional and cultural environments in shaping audit disclosures [18].

Gender diversity is another governance characteristic receiving increasing attention. Diverse audit committees may benefit from a broader range of perspectives, cognitive styles, professional experiences, and approaches to risk. Such diversity may increase the intensity of monitoring and reduce groupthink, potentially affecting both the identification of significant audit issues and the quality of auditor communication. A systematic review of audit committee diversity concludes that diversity characteristics can contribute meaningfully to disclosure quality, although their effects depend on institutional and organizational contexts [19]. Evidence from audit settings also indicates that gender diversity among audit professionals can influence KAM disclosure behavior [20].

The multiple memberships of audit committee members may similarly have competing implications. Members serving on several audit committees can acquire broader professional knowledge, comparative experience, and exposure to different governance practices. This may improve their ability to monitor auditors and recognize significant reporting issues. However, multiple appointments may create busyness and time constraints, potentially weakening monitoring effectiveness. Interlocking relationships between audit committees and auditors have been specifically linked to KAM disclosure, suggesting that professional networks and overlapping governance relationships may influence auditors' reporting decisions [21].

Membership overlap across internal board committees may also shape audit committee effectiveness. Audit committee members who simultaneously serve on risk, nomination, or other board committees may gain broader access to firm-specific information and a more integrated understanding of organizational risks. This information advantage may facilitate the identification of matters requiring auditor attention. On the other hand, extensive committee overlap may impose workload constraints or blur committee responsibilities. Evidence from international settings suggests that audit committee characteristics are materially associated with KAM disclosure

practices and that the direction and strength of these relationships can differ across institutional environments [22, 23].

Professional reputation may further affect the monitoring role of audit committee members. Members who are university academics, audit firm partners, or recognized financial professionals may have greater reputational capital to protect and may therefore demand more rigorous financial reporting and external auditing. Reputational concerns can strengthen incentives for diligence and professional skepticism. At the same time, highly reputable members may facilitate more effective pre-reporting resolution of contentious issues, meaning that professional reputation could influence not only the quantity but also the form and tone of KAM communication.

Recent studies increasingly support the proposition that audit committee characteristics matter for KAM reporting. Evidence from the Middle East shows that audit committee characteristics significantly shape KAM disclosures, emphasizing the importance of governance structure in determining auditor-report content [24]. Studies in other emerging markets similarly document relationships between audit committee and audit firm characteristics and KAM reporting [23]. Research examining correspondence between management disclosures and KAMs further indicates that audit committees play an important role in the relationship between management reporting and auditor communication [25]. These findings suggest that KAM disclosures emerge from a broader governance and communication process rather than from isolated auditor decisions.

The institutional context is especially important because KAM reporting practices may differ across jurisdictions according to regulatory enforcement, governance quality, audit-market structure, investor sophistication, and reporting culture. Evidence from international and emerging-market studies demonstrates substantial variation in KAM determinants and reporting practices [2, 14]. Accordingly, findings derived from developed markets cannot necessarily be generalized to the Iranian capital market, where governance mechanisms, ownership structures, audit-market conditions, and regulatory institutions possess distinctive characteristics.

Research on KAM implementation in Iran remains relatively recent. Evidence from the first year of implementation of Auditing Standard 701 indicates that both the content and determinants of KAM disclosure require careful examination within the Iranian institutional environment [26]. Qualitative research on the KAM disclosure process also shows that the reporting of significant audit matters is shaped by interactions among auditors, firms, governance mechanisms, professional judgments, and contextual conditions [27]. In addition, Iranian evidence suggests that auditor and board characteristics affect the disclosure of significant matters in audit reports [28]. These findings provide an important foundation but also indicate that significant questions remain concerning how audit committee characteristics influence different qualitative dimensions of KAM communication.

Most prior studies have concentrated on the existence, number, or types of KAMs, while comparatively less attention has been devoted to examining the number, readability, and tone of KAM reporting simultaneously. This distinction is important because these dimensions capture different aspects of reporting quality. The number of KAMs reflects the extent of significant matters communicated; readability reflects how easily users can process and understand the disclosures; and tone reflects how risk, uncertainty, or evaluative judgment is linguistically conveyed. Prior studies separately demonstrate the importance of disclosure quantity, textual readability, and linguistic characteristics [9, 10, 12, 29], but integrating these dimensions can provide a more comprehensive assessment of the influence of audit committee characteristics on auditor reporting.

The relevance of such an integrated examination is reinforced by evidence showing that audit partner characteristics can affect KAM readability [29], while accounting expertise and other committee characteristics can

affect the categories and extent of KAM disclosure [16, 17]. Furthermore, systematic evidence indicates that KAM outcomes arise from an interaction of auditor, client, governance, regulatory, and institutional determinants [1, 2]. Thus, restricting analysis to the number of KAMs may overlook important qualitative differences in how significant audit matters are communicated.

These issues are particularly relevant for companies listed on the Tehran Stock Exchange, where improving corporate governance effectiveness and financial reporting transparency remains important for strengthening investor confidence and reducing information asymmetry. Audit committees are designed to enhance the credibility of financial reporting, but their effectiveness may depend on their composition, expertise, independence, diversity, professional experience, tenure, workload, organizational connections, and reputational characteristics. Understanding whether such characteristics influence the way auditors communicate KAMs can therefore contribute to the literature on corporate governance, audit quality, and narrative financial reporting while also providing practical implications for regulators, listed companies, audit committees, and audit firms.

Accordingly, the aim of this study is to examine the impact of audit committee characteristics on the number, readability, and tone of Key Audit Matters reported by independent auditors of companies listed on the Tehran Stock Exchange.

## 2. Methods and Materials

In terms of purpose, the present study is applied research, and in terms of methodology, it is descriptive-correlational and based on ex post facto data. The required data were extracted from financial statements and accompanying notes, the CODAL system, and Rahavard Novin software. Descriptive statistics, Pearson's correlation coefficient, and multiple regression analysis were used to analyze the data, and the regression models were estimated using EViews 8. The regression approach was selected according to the nature of the data and the research objective because it allows the separate effects of the independent variables on the dependent variable to be examined while also enabling the analysis of correlation patterns within ex post facto data.

The statistical population consisted of companies listed on the Tehran Stock Exchange. Financial data and audit reports of eligible companies were used to test the hypotheses. The research sample was selected after applying the following criteria:

- The companies had to be listed on the Tehran Stock Exchange throughout the five fiscal years from 2020/2021 to 2024/2025.
- The companies had to be classified as manufacturing firms; investment companies, financial intermediaries, banks, and insurance companies were excluded from the sample.
- The companies' fiscal year-end had to correspond to March 20.
- The information required to measure the research variables had to be available.

Based on the above criteria, the final sample consisted of 114 companies and 570 firm-year observations ((114 \times 5)).

The research hypotheses were formulated at the end of each hypothesis-development section in nine groups comprising a total of 27 hypotheses.

- **Research Model**

In the present study, the following multiple regression model was used to test the hypotheses:

$$KAM_{i,t} = \beta_1 ACS_{i,t} + \beta_2 ACI_{i,t} + \beta_3 ACF_{i,t} + \beta_4 ACG_{i,t} + \beta_5 ACE_{i,t} + \beta_6 ACT_{i,t} + +\beta_7 ACB_{i,t} + \beta_8 ACO_{i,t} + \beta_9 ACR_{i,t} + \sum_{n} \beta_{10,n} Control_{i,t} + \varepsilon_{i,t}$$

This model is estimated separately for each dependent variable, namely the number, readability, and tone of audit reports.

- **Research Variables**
- **Dependent Variable**
- **Number of Key Audit Matters (KAMN)**

**ASSETS:** Asset disclosure; a dummy variable equal to 1 if the auditor's report contains a disclosure related to assets and 0 otherwise. Asset-related disclosures include matters concerning non-current assets, including tangible and intangible assets, long-term financial investments, and deferred tax assets, as well as current assets, including short-term financial investments and cash. This measure is defined based on Muñoz-Izquierdo et al. (2019).

**LIABIL_CONTING:** Liability disclosure; a dummy variable equal to 1 if the auditor's report includes disclosures related to long-term liabilities, short-term liabilities, or contingent liabilities and 0 if such information is absent (Muñoz-Izquierdo et al., 2019).

**RESULT_PERIOD:** Revenue and expense disclosure; a dummy variable equal to 1 if the auditor's report contains commentary regarding revenue and expense components and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**ACCUM_LOSSES:** Accumulated losses disclosure; a dummy variable equal to 1 if the auditor's report provides information concerning the company's accumulated losses from previous years and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**INFO_OMISSION:** Commentary on the information presented; a dummy variable equal to 1 if the auditor's report contains commentary on the information presented in support of the financial statement accounts and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**NEGAT_WC:** Commentary on working capital; a dummy variable equal to 1 if the auditor's report includes commentary on the company's negative working capital and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**SUBSEQ_EVENTS:** Commentary on the company's future condition; a dummy variable equal to 1 if the auditor's report includes commentary concerning the company's future condition and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**REGUL_ENVIRON:** Commentary on legal and economic environmental factors; a dummy variable equal to 1 if the auditor's report contains commentary on legal or economic factors affecting the company and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**MGMT_PLAN:** Commentary on management or welfare plans; a dummy variable equal to 1 if the auditor's report contains commentary on management or welfare programs implemented by the company and 0 otherwise (Muñoz-Izquierdo et al., 2019).

**GC:** Going-concern reporting; a dummy variable equal to 1 if the audit report contains a report or paragraph related to going concern and 0 otherwise (Muñoz-Izquierdo et al., 2019).

Finally, the sum of the above scores represents the Key Audit Matter disclosure score in audit reports (KAMs) (Azarbaijani & Heydari Soltanabadi, 2025; Hemmati & Khezripour, 2025).

- **Readability of Key Audit Matters (KAMR)**

The readability of Key Audit Matters is measured using the Fog Index, and the calculated index value is multiplied by negative one to establish a direct relationship with readability. The Fog Index is a function of two

components: sentence length, measured by the number of words, and complex words, defined as words containing three or more syllables. Gunning (1952) defines the index as follows:

$$\text{Fog Index} = 0.4 \times (\text{Average Number of Words per Sentence} + \text{Percentage of Complex Words})$$

where:

**Average number of words per sentence:** the total number of words in the text divided by the total number of sentences.

**Percentage of complex words:** the number of complex words divided by the total number of words in the text. In calculating complex words for the above index, the following are excluded:

- Proper nouns
- Hyphenated words
- Verbs that become three-syllable or longer words solely because of the addition of a suffix

The relationship between the Fog Index and readability level is interpreted as follows: (\mathrm{FOG} \geq 18) indicates extremely complex and difficult-to-read text; values from 14 to 18 indicate difficult text; values from 12 to 14 indicate appropriate text; values from 10 to 12 indicate acceptable text; and values from 8 to 10 indicate easy-to-read text. Because higher Fog Index values indicate lower audit report readability, the calculated value is multiplied by negative one ((-1)) to obtain a direct measure of audit report readability.

- **Independent Variable**
- **Audit Committee-Level Characteristics**
- **Audit Committee Size (ACS)**

Audit committee size is equal to the total number of members serving on the audit committee.

- **Audit Committee Independence (ACI)**

Audit committee independence is equal to the ratio of independent audit committee members to the total number of members serving on the committee.

- **Audit Committee Financial Expertise (ACF)**

Audit committee financial expertise is equal to the ratio of members holding an academic degree or a nationally or internationally recognized professional qualification in finance-related fields, including accounting, auditing, financial management, economics, and other management disciplines with a financial or economic orientation, to the total number of members serving on the audit committee.

- **Audit Committee Gender Diversity (ACG)**

Audit committee gender diversity is equal to the ratio of female members to the total number of members serving on the audit committee.

- **Audit Committee Experience (ACE)**

Audit committee experience is equal to the ratio of audit committee members with more than three years of prior experience serving on the audit committees of other companies to the total number of members serving on the audit committee.

- **Audit Committee Tenure (ACT)**

Audit committee tenure is equal to the average number of years that audit committee members have served on the current audit committee.

- **Audit Committee Multiple Memberships (ACB)**

This variable is equal to the total number of companies in which audit committee members simultaneously serve as audit committee members. Membership status is determined as of the fiscal year-end date corresponding to March 20.

- **Audit Committee Membership Overlap (ACO)**

This variable is equal to the ratio of audit committee members who simultaneously serve on other internal committees of the company, such as the nomination committee or risk committee, to the total number of audit committee members. Membership status is determined as of the fiscal year-end date corresponding to March 20.

- **Audit Committee Professional Reputation (ACR)**

Audit committee professional reputation is equal to the ratio of members who are partners in audit firms or university faculty members to the total number of members serving on the audit committee.

- **Control Variables**
- **Audit Quality (AQ)**

Audit quality is measured using the absolute value of discretionary accruals. Discretionary accruals are estimated based on the Jones (1991) model with the performance adjustment proposed by Kothari et al. (2005). Under this approach, industry-level regression residuals are treated as discretionary accruals.

$$\frac{\mathrm{ACC_t}}{\mathrm{TA_{t-1}}} = \alpha_0 + \alpha_1\left(\frac{1}{\mathrm{TA_{t-1}}}\right) + \alpha_2\left(\frac{\Delta\mathrm{REV_t} - \Delta\mathrm{REC_t}}{\mathrm{TA_{t-1}}}\right) + \alpha_3\left(\frac{\mathrm{PPE_t}}{\mathrm{TA_{t-1}}}\right) + \mathrm{ROA_t} + \varepsilon_t$$

where:

**ACC:** Total accruals of the company, calculated as net income minus cash flow from operating activities.

**TA:** Total assets of the company at the beginning of the period.

**ΔREV:** Change in net sales relative to the previous year.

**ΔREC:** Change in accounts receivable relative to the previous year.

**PPE:** Gross tangible fixed assets.

**ROA:** Return on assets of the company.

**(\varepsilon_{i,t}):** The regression residual representing discretionary accruals.

**Audit Opinion (AO):** Equal to 1 if the independent auditor's opinion in the previous year was modified and 0 otherwise.

**Audit Lag (AL):** The natural logarithm of the number of days between the company's fiscal year-end and the date on which the auditor's report was signed.

**Firm Size (FS):** The natural logarithm of total sales.

**Financial Leverage (FL):** The ratio of total liabilities to total assets.

**Receivables Ratio (RR):** The ratio of accounts receivable to total assets.

**Inventory Ratio (IR):** The ratio of inventory to total assets.

## 3. Findings and Results

Before testing the hypotheses, it is necessary to calculate and interpret the descriptive statistics of the research variables. Descriptive statistics provide an overall picture of the distribution and dispersion of the sample data. The results are presented in Table 1.

**Table 1. Descriptive Statistics of the Variables**

| Variable | Mean | Median | Maximum | Minimum | SD | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Auditor's report tone (KAMTONE) | 0.246 | 0.241 | 0.996 | -0.738 | 0.356 | -0.127 | 2.626 |
| Number of Key Audit Matters (KAMN) | 2.795 | 3.000 | 5.000 | 0.000 | 1.119 | 0.004 | 2.779 |
| Audit report readability (KAMR) | -7.859 | -7.275 | -36.670 | 0.000 | 5.834 | -1.336 | 6.267 |
| Audit committee size (ACS) | 1.183 | 1.100 | 1.610 | 1.100 | 0.187 | 1.826 | 4.353 |
| Audit committee independence (ACI) | 0.582 | 0.670 | 1.000 | 0.000 | 0.289 | -0.204 | 1.967 |
| Audit committee financial expertise (ACF) | 0.643 | 0.670 | 1.000 | 0.000 | 0.359 | -0.300 | 1.490 |
| Audit committee gender diversity (ACG) | 0.023 | 0.000 | 0.670 | 0.000 | 0.080 | 4.286 | 24.155 |
| Audit committee experience (ACE) | 0.440 | 0.333 | 1.000 | 0.000 | 0.287 | 0.203 | 2.379 |
| Audit committee tenure (ACT) | 2.019 | 2.333 | 2.333 | 1.000 | 0.432 | -0.960 | 2.394 |
| Audit committee multiple memberships (ACB) | 4.879 | 5.000 | 5.000 | 3.000 | 0.412 | -0.540 | 14.899 |
| Audit committee membership overlap (ACO) | 0.345 | 0.333 | 1.000 | 0.000 | 0.272 | 0.447 | 2.612 |
| Audit committee professional reputation (ACR) | 0.279 | 0.333 | 1.000 | 0.000 | 0.251 | 0.653 | 3.015 |
| Audit quality (AQ) | -0.000000000877 | -0.0003 | 3.839 | -2.416 | 0.312 | 1.822 | 63.667 |
| Auditor's opinion (AO) | 0.316 | 0.000 | 1.000 | 0.000 | 0.465 | 0.793 | 1.628 |
| Audit lag (AL) | 4.382 | 4.494 | 6.382 | 2.996 | 0.412 | -0.254 | 5.066 |
| Firm size (FS) | 16.335 | 16.168 | 21.922 | 11.629 | 1.554 | 0.632 | 4.224 |
| Financial leverage (FL) | 0.492 | 0.476 | 1.805 | 0.031 | 0.224 | 0.821 | 5.386 |
| Receivables ratio (RR) | 0.267 | 0.238 | 0.801 | 0.000 | 0.178 | 0.669 | 2.855 |
| Inventory ratio (IR) | 0.265 | 0.233 | 0.899 | 0.015 | 0.154 | 0.914 | 3.792 |

The descriptive statistics of the research variables are presented in Table 1 and provide an overall picture of the characteristics of the data under examination. Among the dependent variables, the mean auditor's report tone (KAMTONE) is 0.246, indicating a relatively balanced level of tone in audit reports. The mean number of Key Audit Matters (KAMN) is 2.795, indicating that approximately three Key Audit Matters were disclosed, on average, in companies' audit reports. With respect to audit report readability (KAMR), a mean of -7.859 is observed, reflecting variation in the complexity and readability of audit reports among the sample companies. Among the variables related to audit committee characteristics, the mean audit committee size (ACS) is 1.183, while the mean audit committee independence (ACI) is 0.582, indicating a relatively appropriate representation of independent members on these committees. The mean financial expertise (ACF) is 0.643, and the mean member experience (ACE) is 0.440, indicating that a proportion of audit committee members possess financial knowledge and relevant experience. Among the control variables, the mean firm size (FS) is 16.335 and the mean financial leverage (FL) is 0.492. Overall, the standard deviations, skewness, and kurtosis values indicate that the research data exhibit appropriate dispersion and are suitable for statistical analyses and hypothesis testing.

The Levin-Lin-Chu unit root test was used to examine the stationarity of the model variables. Under this test, the null hypothesis indicates the presence of a unit root. If the probability value is less than 0.05, the null hypothesis is rejected at the 95% confidence level. The unit root test results for the model variables are presented in Table 2.

**Table 2. Results of the Levin-Lin-Chu (LLC) Unit Root Test with Intercept and Trend**

| Variable | Test Statistic | *p* |
|---|---|---|
| Auditor's report tone (KAMTONE) | -24.554 | 0.0000 |
| Number of Key Audit Matters (KAMN) | -25.543 | 0.0000 |
| Audit report readability (KAMR) | -67.946 | 0.0000 |
| Audit committee size (ACS) | -16.360 | 0.0000 |
| Audit committee independence (ACI) | -23.720 | 0.0000 |
| Audit committee financial expertise (ACF) | -15.275 | 0.0000 |

| | | |
|---|---|---|
| Audit committee gender diversity (ACG) | -9.431 | 0.0000 |
| Audit committee experience (ACE) | -63.044 | 0.0000 |
| Audit committee tenure (ACT) | -25.710 | 0.0000 |
| Audit committee multiple memberships (ACB) | -20.098 | 0.0000 |
| Audit committee membership overlap (ACO) | -693.741 | 0.0000 |
| Audit committee professional reputation (ACR) | -32.813 | 0.0000 |
| Audit quality (AQ) | -561.354 | 0.0000 |
| Auditor's opinion (AO) | -16.644 | 0.0000 |
| Audit lag (AL) | -39.576 | 0.0000 |
| Firm size (FS) | -51.962 | 0.0000 |
| Financial leverage (FL) | -60.673 | 0.0000 |
| Receivables ratio (RR) | -37.533 | 0.0000 |
| Inventory ratio (IR) | -254.048 | 0.0000 |

Based on the results presented in Table 2, all research variables are stationary.

To examine multicollinearity among the explanatory variables, Pearson correlation coefficients were initially assessed. A very high linear correlation among independent variables may affect the stability of regression coefficients. The results of the correlation matrix are presented in Table 3.

**Table 3. Pearson Correlation Matrix for the Independent Variables**

| Variable | ACS | ACI | ACF | ACG | ACE | ACT | ACB | ACO | ACR | AQ | AO | AL | FS | FL | RR | IR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACS | 1 | | | | | | | | | | | | | | | |
| ACI | 0.025 | 1 | | | | | | | | | | | | | | |
| ACF | 0.012 | 0.595 | 1 | | | | | | | | | | | | | |
| ACG | 0.015 | 0.018 | 0.083 | 1 | | | | | | | | | | | | |
| ACE | 0.036 | 0.005 | 0.071 | 0.022 | 1 | | | | | | | | | | | |
| ACT | -0.248 | 0.030 | 0.068 | -0.014 | -0.029 | 1 | | | | | | | | | | |
| ACB | 0.084 | -0.012 | 0.003 | -0.093 | 0.045 | -0.086 | 1 | | | | | | | | | |
| ACO | -0.015 | -0.008 | 0.020 | 0.105 | -0.024 | 0.038 | 0.028 | 1 | | | | | | | | |
| ACR | -0.063 | 0.053 | 0.002 | 0.029 | -0.067 | -0.028 | 0.049 | -0.004 | 1 | | | | | | | |
| AQ | -0.036 | 0.008 | 0.004 | 0.006 | 0.018 | -0.025 | -0.022 | 0.039 | -0.021 | 1 | | | | | | |
| AO | -0.089 | -0.035 | -0.108 | 0.016 | -0.074 | -0.083 | -0.0039 | -0.049 | 0.012 | -0.012 | 1 | | | | | |
| AL | 0.018 | -0.168 | -0.143 | 0.041 | 0.005 | -0.104 | 0.006 | -0.043 | -0.008 | -0.012 | 0.249 | 1 | | | | |
| FS | 0.183 | 0.010 | 0.059 | -0.049 | 0.038 | -0.097 | -0.004 | 0.016 | -0.069 | 0.018 | -0.001 | 0.173 | 1 | | | |
| FL | 0.043 | 0.029 | -0.020 | -0.013 | 0.055 | -0.045 | -0.054 | 0.015 | 0.006 | 0.009 | 0.054 | 0.038 | 0.288 | 1 | | |
| RR | -0.077 | -0.125 | -0.011 | 0.003 | 0.047 | 0.000 | -0.042 | -0.030 | -0.020 | -0.005 | -0.006 | 0.110 | 0.051 | 0.215 | 1 | |
| IR | 0.102 | -0.088 | -0.079 | 0.033 | 0.002 | -0.023 | -0.012 | 0.011 | 0.046 | -0.070 | 0.056 | 0.060 | -0.035 | 0.153 | -0.235 | 1 |

**Table 4. Variance Inflation Factor (VIF) Test Results**

| Variable | Uncentered VIF | Centered VIF |
|---|---|---|
| Audit committee size (ACS) | 4.773 | 1.144 |

| | | |
|---|---|---|
| Audit committee independence (ACI) | 8.331 | 1.648 |
| Audit committee financial expertise (ACF) | 6.868 | 1.630 |
| Audit committee gender diversity (ACG) | 1.129 | 1.042 |
| Audit committee experience (ACE) | 3.451 | 1.027 |
| Audit committee tenure (ACT) | 2.209 | 1.103 |
| Audit committee multiple memberships (ACB) | 4.553 | 1.037 |
| Audit committee membership overlap (ACO) | 2.672 | 1.024 |
| Audit committee professional reputation (ACR) | 2.291 | 1.026 |
| Audit quality (AQ) | 1.012 | 1.012 |
| Auditor's opinion (AO) | 1.623 | 1.110 |
| Audit lag (AL) | 3.364 | 1.165 |
| Firm size (FS) | 4.240 | 1.202 |
| Financial leverage (FL) | 7.226 | 1.237 |
| Receivables ratio (RR) | 3.913 | 1.206 |
| Inventory ratio (IR) | 4.648 | 1.171 |

The variance inflation factor (VIF) was used to assess multicollinearity among the independent variables. The results presented in Table 4 indicate that the centered VIF values for all variables are below 10. Therefore, no severe multicollinearity problem is observed in the model, and the variables can be entered simultaneously into the regression model.

The results of the Chow F-test indicated that the probability value was less than 5%; therefore, panel data were used to estimate the models. Subsequently, the Hausman test was employed to determine whether a fixed-effects or random-effects specification was more appropriate. Because the probability value of the Hausman test was also below 5%, the fixed-effects specification was selected as the appropriate model. The results are presented in Table 5.

**Table 5. Results of the Chow F-Test and Hausman Test**

| Model | Test | Statistic | *p* | Decision |
|---|---|---|---|---|
| Model 1 | Chow F-test | 2.303 | 0.000 | Panel-data model selected |
| | Hausman test | 5.158 | 0.000 | Fixed-effects model selected |
| Model 2 | Chow F-test | 1.775 | 0.000 | Panel-data model selected |
| | Hausman test | 10.514 | 0.000 | Fixed-effects model selected |
| Model 3 | Chow F-test | 1.894 | 0.000 | Panel-data model selected |
| | Hausman test | 18.704 | 0.004 | Fixed-effects model selected |

Normality of regression residuals is one of the important assumptions underlying the validity of regression tests. This assumption requires the statistical distribution of the error term to be normal. Violation of this assumption may result from the presence of outliers. In this study, the Jarque-Bera test was used to examine the normality of the distribution of the error terms. The null hypothesis of this test indicates that the errors are normally distributed; therefore, when the probability value exceeds 5%, the null hypothesis is not rejected. The results are presented in Table 6.

**Table 6. Results of the Normality Test for Model Residuals**

| Model | Jarque-Bera Statistic | *p* |
|---|---|---|
| Model 1 | 24.8 | 0.080 |
| Model 2 | 24.6 | 0.089 |
| Model 3 | 24.44 | 0.088 |

One of the fundamental assumptions of regression equations is equality of error variances, or homoscedasticity. If this condition is violated, conventional estimators are no longer efficient, and generalized least squares can be employed as a corrective procedure. By applying appropriate weighting, this method adjusts for the effects of heteroscedasticity (Souri, 2018). In the present study, after selection of the optimal model, the presence of heteroscedasticity was examined. The test results are reported in Table 7.

**Table 7. Results of the Heteroscedasticity Tests for the Research Models**

| Model | Bartlett Statistic | *p* | Result |
|---|---|---|---|
| Model 1 | 3.23 | 0.350 | Homoscedasticity |
| Model 2 | 8.09 | 0.088 | Homoscedasticity |
| Model 3 | 11.11 | 0.060 | Homoscedasticity |

Given that the significance levels reported in the table are greater than 0.05, it can be concluded that the model error terms exhibit homoscedasticity.

**Table 8. Results of Model Estimation**

| Variable | KAMTONE Coefficient | *t* | *p* | KAMN Coefficient | *t* | *p* | KAMR Coefficient | *t* | *p* |
|---|---|---|---|---|---|---|---|---|---|
| Intercept | 0.252 | 0.937 | 0.350 | -0.186 | -0.215 | 0.830 | 13.729 | 1.420 | 0.157 |
| Audit committee size (ACS) | 0.090 | 4.024 | 0.000 | 0.114 | 0.720 | 0.473 | 1.941 | 3.274 | 0.001 |
| Audit committee independence (ACI) | 0.154 | 5.066 | 0.000 | 0.185 | 1.188 | 0.236 | 0.036 | 0.038 | 0.970 |
| Audit committee financial expertise (ACF) | 0.124 | -4.373 | 0.000 | -0.366 | -2.411 | 0.017 | 2.291 | 2.155 | 0.032 |
| Audit committee gender diversity (ACG) | 0.441 | 3.549 | 0.001 | -0.726 | -2.401 | 0.017 | 11.760 | 8.463 | 0.000 |
| Audit committee experience (ACE) | 0.045 | 2.058 | 0.041 | -0.021 | -0.221 | 0.825 | 0.975 | 11.704 | 0.000 |
| Audit committee tenure (ACT) | 0.040 | 2.633 | 0.009 | -0.223 | -2.673 | 0.008 | 0.351 | 3.033 | 0.003 |
| Audit committee multiple memberships (ACB) | 0.034 | 3.224 | 0.001 | 0.027 | 0.462 | 0.645 | 0.105 | 0.401 | 0.689 |
| Audit committee membership overlap (ACO) | 0.028 | 1.200 | 0.231 | 0.538 | 4.407 | 0.000 | 0.319 | 0.799 | 0.425 |
| Audit committee professional reputation (ACR) | -0.091 | -2.506 | 0.013 | -0.039 | -0.382 | 0.703 | 0.844 | 2.216 | 0.028 |
| Audit quality (AQ) | 0.059 | 1.731 | 0.085 | 0.088 | 0.673 | 0.502 | 1.589 | 1.923 | 0.056 |
| Auditor's opinion (AO) | -0.094 | -8.664 | 0.000 | 0.083 | 1.137 | 0.257 | 1.535 | 3.950 | 0.000 |
| Audit lag (AL) | 0.023 | 1.140 | 0.256 | 0.257 | 2.109 | 0.036 | -1.017 | -2.074 | 0.039 |
| Firm size (FS) | -0.007 | -0.493 | 0.622 | 0.107 | 2.410 | 0.017 | -1.149 | -2.973 | 0.003 |
| Financial leverage (FL) | -0.149 | -2.123 | 0.035 | 0.192 | 0.763 | 0.446 | -4.170 | -5.817 | 0.000 |
| Receivables ratio (RR) | 0.286 | 2.748 | 0.007 | -0.700 | -2.454 | 0.015 | 10.219 | 14.273 | 0.000 |
| Inventory ratio (IR) | 0.142 | 1.276 | 0.203 | 1.319 | 3.702 | 0.000 | 6.697 | 5.557 | 0.000 |
| (R^2) | 0.749 | | | 0.735 | | | 0.684 | | |
| Adjusted (R^2) | 0.717 | | | 0.705 | | | 0.673 | | |
| (F)-statistic | 29.664 | | | 23.071 | | | 95.988 | | |
| Significance of (F) | 0.000 | | | 0.000 | | | 0.000 | | |
| Durbin-Watson statistic | 2.219 | | | 2.341 | | | 2.229 | | |

**Findings Related to the Number of Key Audit Matters**

The results obtained from estimating the regression model to examine the effect of audit committee size on the number of Key Audit Matters indicate that the coefficient for audit committee size (ACS) is 0.114. Given that the obtained significance level is 0.473, which is greater than the 0.05 significance threshold, no statistically significant relationship is observed between audit committee size and the number of Key Audit Matters. Therefore, variations in the number of audit committee members did not have a substantial effect on the number of Key Audit Matters in the sample examined.

According to the model estimation results, the coefficient for audit committee independence (ACI) in the model of the number of Key Audit Matters is 0.185. Given that the probability value is 0.236, which is greater than the 0.05 significance threshold, a significant relationship between audit committee independence and the number of Key Audit Matters cannot be confirmed.

The regression analysis examining the effect of audit committee financial expertise on the number of Key Audit Matters shows that the coefficient for audit committee financial expertise (ACF) is -0.366. The probability value is 0.017, which is below the 0.05 significance threshold. Therefore, a significant negative relationship exists between audit committee financial expertise and the number of Key Audit Matters.

The regression results indicate that the coefficient for audit committee gender diversity (ACG) in the model of the number of Key Audit Matters is -0.726. Given the significance level of 0.017, which is below 0.05, a significant negative relationship is observed between audit committee gender diversity and the number of Key Audit Matters.

The regression results for audit committee experience (ACE) in the model of the number of Key Audit Matters indicate that the coefficient for this variable is -0.021. Because the significance level is 0.825, which is greater than 0.05, no significant relationship is observed between audit committee experience and the number of Key Audit Matters.

The regression results indicate that the coefficient for audit committee tenure (ACT) in the model of the number of Key Audit Matters is -0.223. The probability value is 0.008, which is below the 0.05 significance threshold. Therefore, a significant negative relationship exists between audit committee tenure and the number of Key Audit Matters.

The regression model results show that the coefficient for audit committee members' multiple memberships (ACB) in the model of the number of Key Audit Matters is 0.027. Given the significance level of 0.645, which exceeds the 0.05 significance threshold, no significant relationship is observed between this variable and the number of Key Audit Matters.

The results indicate that the coefficient for audit committee membership overlap (ACO) in the model of the number of Key Audit Matters is 0.538. The significance level for this variable is 0.000, which is below the 0.05 significance threshold. Therefore, a significant positive relationship exists between audit committee membership overlap and the number of Key Audit Matters.

The regression results show that the coefficient for audit committee professional reputation (ACR) in the model of the number of Key Audit Matters is -0.039. The significance level for this variable is 0.703, which is greater than 0.05. Therefore, no significant relationship exists between audit committee professional reputation and the number of Key Audit Matters.

**Findings Related to Audit Report Readability**

The regression results concerning the relationship between audit committee size and audit report readability indicate that the coefficient for this variable is 1.941. Because the significance level is 0.001, which is below 0.05, it

can be concluded that audit committee size has a significant relationship with audit report readability. In other words, there is a significant positive relationship between audit committee size and improved audit report readability.

The regression results indicate that the coefficient for audit committee independence in the audit report readability model is 0.036. The significance level for this variable is 0.970, which is greater than 0.05. Therefore, no statistically significant relationship is observed between audit committee independence and audit report readability.

The regression model results regarding the relationship between audit committee financial expertise and audit report readability indicate that the coefficient for this variable is 2.291. Given the significance level of 0.032, which is below 0.05, it can be concluded that audit committee members' financial expertise has a significant positive relationship with audit report readability.

In examining the relationship between audit committee gender diversity and audit report readability, the coefficient for this variable is 11.760. The probability value is 0.000, which is below the 0.05 significance threshold. Therefore, audit committee gender diversity has a statistically significant relationship with audit report readability.

In the audit report readability model, the coefficient for audit committee experience is 0.975. The significance level for this variable is 0.000, which is below 0.05 and indicates a significant positive relationship between audit committee experience and audit report readability.

In the audit report readability model, the coefficient for audit committee tenure is 0.351. The significance level for this variable is 0.003, which is below 0.05. Therefore, the relationship between audit committee tenure and audit report readability is evaluated as positive and statistically significant.

In examining the relationship between audit committee members' multiple memberships and audit report readability, the coefficient for this variable is 0.105. The significance level is 0.689, which is greater than 0.05. Therefore, no statistically significant relationship exists between the two variables.

In the audit report readability model, the coefficient for audit committee membership overlap is 0.319. Given the significance level of 0.425, which is greater than 0.05, a significant relationship between audit committee membership overlap and audit report readability cannot be confirmed.

In examining the relationship between audit committee professional reputation and audit report readability, the coefficient for this variable is 0.844. The significance level is 0.028, which is below the 0.05 significance threshold. Therefore, audit committee professional reputation has a significant positive relationship with audit report readability.

**Findings Related to Audit Reporting Tone**

The findings obtained from the regression model concerning the effect of audit committee size on audit reporting tone indicate that the coefficient for ACS is 0.090. The significance level is 0.000, which is below the 0.05 significance threshold and indicates a significant positive relationship between the two variables. Therefore, audit committee size is significantly associated with audit reporting tone.

In examining the relationship between audit committee independence and audit reporting tone, the coefficient for this variable is 0.154. Given that the significance level is 0.000, which is below 0.05, it can be concluded that audit committee independence has a significant positive relationship with audit reporting tone.

In the audit reporting tone model, the coefficient for audit committee financial expertise is -0.124. The probability value is 0.000, which is below the 0.05 significance threshold. Therefore, the relationship between audit committee financial expertise and audit reporting tone is statistically significant and negative.

The regression model findings indicate that the coefficient for audit committee gender diversity in the audit reporting tone model is 0.441. Given the significance level of 0.001, which is below 0.05, the relationship between audit committee gender diversity and audit reporting tone is evaluated as positive and statistically significant.

The regression estimation results for audit reporting tone indicate that the coefficient for audit committee experience is 0.045. Given the significance level of 0.041, which is below the 0.05 significance threshold, it can be concluded that audit committee experience has a significant positive relationship with audit reporting tone.

Examination of the effect of audit committee tenure on audit reporting tone indicates that the coefficient for this variable is 0.040. Given the significance level of 0.009, which is below 0.05, a significant positive relationship is observed between audit committee tenure and audit reporting tone.

The regression results concerning audit reporting tone indicate that the coefficient for audit committee members' multiple memberships is 0.034. The probability value is 0.001, which is below 0.05. Consequently, the relationship between audit committee members' multiple memberships and audit reporting tone is positive and statistically significant.

The regression findings for audit reporting tone indicate that the coefficient for audit committee membership overlap is 0.028. The probability value is 0.231, which is greater than the 0.05 significance threshold. Therefore, no significant relationship is observed between audit committee membership overlap and audit reporting tone.

The regression model results for audit reporting tone indicate that the coefficient for audit committee professional reputation is -0.091. Given the significance level of 0.013, which is below 0.05, it can be concluded that audit committee professional reputation has a significant negative relationship with audit reporting tone.

The model fit results indicate that the audit reporting tone model has substantial explanatory power, with an (R^2) value of 0.749 and an adjusted (R^2) value of 0.717. The (F)-statistic and its significance level ((p = 0.000)) also indicate that the model is statistically significant overall. The Durbin-Watson statistic of 2.219 further indicates that there is no autocorrelation problem in the error terms.

For the model examining the number of Key Audit Matters, (R^2 = 0.735) and the adjusted (R^2 = 0.705), indicating satisfactory explanatory power. The (F)-statistic, with a significance level of 0.000, confirms the overall statistical significance of the model. Furthermore, the Durbin-Watson statistic of 2.341 indicates the absence of significant autocorrelation in the error terms. In the audit report readability model, (R^2 = 0.684) and the adjusted (R^2 = 0.673), indicating that the model has an acceptable fit. The (F)-statistic, with a significance level of 0.000, demonstrates the overall statistical significance of the model, while the Durbin-Watson statistic of 2.229 indicates independence of the error terms.

## 4. Discussion and Conclusion

The present study examined the effect of audit committee characteristics on three dimensions of Key Audit Matter reporting, namely the number of Key Audit Matters, the readability of audit reports, and audit reporting tone. The findings indicate that audit committee characteristics do not influence all dimensions of KAM reporting in the same manner. Some structural and professional characteristics were significantly associated with the number of matters disclosed, whereas others were more strongly related to the linguistic and communicative properties of the report. This pattern supports the view that Key Audit Matter reporting is not merely an auditor-level reporting decision but is embedded within a broader governance environment in which the audit committee may influence the identification, discussion, resolution, and final communication of significant audit issues. This interpretation is consistent with prior evidence showing that audit committee characteristics are important determinants of KAM

disclosure and that governance mechanisms shape both the content and presentation of expanded auditor reporting [22-24].

With respect to the number of Key Audit Matters, audit committee size was not significantly associated with the number of matters disclosed. This result suggests that merely increasing the number of committee members does not necessarily increase the extent of KAM disclosure. A larger committee may provide additional human resources and broader perspectives, but these benefits may be offset by coordination difficulties or by the fact that committee effectiveness depends more on member expertise and involvement than on numerical size alone. This result is broadly compatible with the literature showing that structural characteristics of audit committees do not always produce uniform effects on KAM disclosure and that the effectiveness of committees depends on the combination of their characteristics rather than on a single structural feature [2, 22].

Audit committee independence was also not significantly related to the number of KAMs. One possible explanation is that independent members may improve oversight quality without necessarily influencing how many matters are ultimately classified as Key Audit Matters. Independent audit committee members may facilitate better discussions with external auditors, strengthen financial reporting controls, and support the resolution of contentious matters before the final report is issued. Therefore, enhanced independence can affect the quality of the audit process without necessarily increasing disclosure volume. This interpretation is consistent with research emphasizing the monitoring role of independent audit committees and their contribution to external audit outcomes, while also indicating that the precise effect of independence depends on the institutional context and the outcome under examination [15, 24].

In contrast, audit committee financial expertise had a significant negative relationship with the number of KAMs. This finding may indicate that financially knowledgeable committee members identify and address complex accounting and reporting issues more effectively before the completion of the audit. Greater expertise may improve the quality of communication between the audit committee, management, and external auditors, resulting in more timely resolution of significant issues and therefore fewer matters requiring separate communication as KAMs. At the same time, financial experts may be better able to distinguish genuinely significant matters from routine audit issues. This result is consistent with prior research demonstrating that audit committee expertise influences external auditors' KAM disclosures and the types of KAMs communicated [16, 17]. The result also reinforces the broader argument that technical competence, rather than committee size alone, is an important determinant of audit committee effectiveness.

Gender diversity was negatively and significantly associated with the number of KAMs. This result may reflect the monitoring advantages arising from a greater diversity of viewpoints, professional experiences, and approaches to risk evaluation. A more diverse audit committee may challenge management more effectively and contribute to the earlier identification and resolution of reporting problems. As a result, fewer unresolved issues may remain to be communicated as KAMs at the end of the audit. The finding is consistent with the growing literature highlighting the positive governance consequences of audit committee diversity and its potential to enhance disclosure quality and monitoring effectiveness [19]. It also aligns with evidence that gender-related characteristics within the audit environment can affect KAM disclosure decisions [20].

Audit committee experience did not have a significant effect on the number of KAMs, whereas audit committee tenure was negatively and significantly associated with KAM count. The insignificant effect of general experience may indicate that prior service on other audit committees does not automatically translate into more or fewer KAM disclosures. By contrast, tenure on the current committee may provide firm-specific knowledge that allows

members to understand recurring reporting risks, historical accounting issues, and organizational processes more effectively. Such knowledge may enable committee members to resolve significant matters before they reach the reporting stage, thereby reducing the number of disclosed KAMs. This interpretation is consistent with evidence that audit committee experience contributes to audit quality [13], while tenure-related effects depend on accumulated knowledge, familiarity, and the institutional environment [18].

Multiple audit committee memberships were not significantly related to the number of KAMs. This suggests that the potential benefits of cross-company experience may be offset by the busyness associated with simultaneous committee service. Members holding several positions may acquire broader governance knowledge, but they may also have less time available to devote to the audit committee of a specific company. Consequently, the net effect may be statistically insignificant. This result is consistent with the argument that interlocking and multiple governance relationships can have both informational benefits and workload costs [21].

Audit committee membership overlap was positively and significantly associated with the number of KAMs. This finding may be explained by the broader information access available to members serving simultaneously on other internal committees, such as risk or nomination committees. Such overlapping membership can provide a more comprehensive understanding of firm risks, strategic issues, and governance concerns, thereby enabling audit committee members and external auditors to identify a larger number of significant audit matters. In this sense, overlap may enhance information integration across governance mechanisms. The result is consistent with prior evidence emphasizing the importance of interconnected governance structures and communication channels in shaping KAM disclosures [21, 25].

Professional reputation was not significantly associated with the number of KAMs. Although reputable members may possess strong incentives to maintain high reporting quality, their presence may not directly affect disclosure volume. Their influence may instead be more evident in qualitative aspects of the report, such as wording, tone, or clarity. The absence of a significant relationship with KAM count therefore suggests that professional standing may influence the manner rather than the quantity of auditor communication.

The results regarding audit report readability reveal a different pattern. Audit committee size was positively and significantly associated with readability. Larger committees may provide broader expertise and facilitate more extensive review and discussion of audit matters, thereby contributing to clearer communication between auditors and those charged with governance. Through stronger oversight and review, a larger committee may encourage more understandable explanations of complex audit matters. This finding supports the broader view that governance characteristics can affect not only whether KAMs are disclosed but also how clearly they are communicated [10, 29].

Audit committee independence was not significantly associated with readability. This suggests that independence alone may improve objectivity in monitoring without directly affecting the linguistic complexity of audit reports. Readability is likely to be more sensitive to professional knowledge, communication skills, auditor characteristics, and engagement-specific factors than to formal independence. Prior studies similarly indicate that the linguistic properties of KAMs arise from multiple auditor-, firm-, and governance-level determinants rather than from a single governance characteristic [1, 10].

Financial expertise had a positive and significant effect on audit report readability. Financially knowledgeable committee members may communicate more effectively with auditors regarding complex accounting matters and may encourage auditors to explain technical issues in a clearer and more structured manner. Their ability to understand accounting complexity can also allow them to identify unnecessarily technical or ambiguous wording

during discussions with the external auditor. This result aligns with the findings of Zhang and Shailer, who demonstrated the importance of audit committee expertise for KAM disclosure, and with evidence showing that the professional characteristics of governance participants influence the content and communication of KAMs [16, 17].

Gender diversity also exhibited a strong positive association with readability. Diverse committees may bring a wider range of communication perspectives and may be more attentive to how financial information is understood by different stakeholder groups. This can reduce excessive technicality and encourage more accessible disclosure. The result supports the argument that diversity improves the quality of monitoring and disclosure by mitigating groupthink and broadening the perspectives incorporated into governance decisions [19]. It is also consistent with evidence indicating that gender characteristics can shape KAM-related reporting outcomes [20].

Audit committee experience and tenure were both positively related to readability. Experienced members are likely to have greater familiarity with auditor communication and reporting conventions, enabling them to assess whether KAM descriptions are understandable and sufficiently informative. Similarly, longer tenure provides firm-specific knowledge that can improve the committee's ability to communicate complex company-specific issues to external auditors and to evaluate whether those matters are described clearly in the final report. These results are consistent with evidence linking audit committee experience to audit quality [13] and with research emphasizing the role of tenure in shaping audit-related judgments and disclosure practices [18].

Multiple memberships and membership overlap were not significantly related to readability. These findings suggest that broader external or internal committee connections may provide information advantages but do not necessarily improve the linguistic clarity of KAM disclosures. In contrast, audit committee professional reputation was positively and significantly associated with readability. Reputable members, particularly audit professionals or academics, may place greater emphasis on high-quality professional communication and may encourage auditors to produce more precise and understandable reports. This result is compatible with research showing that KAM readability is influenced by professional characteristics within the audit environment [29]. It also accords with evidence that greater readability improves the informational usefulness of KAM disclosures for users and analysts [8, 9].

The findings concerning audit reporting tone further demonstrate the multidimensional influence of audit committee characteristics. Audit committee size had a positive and significant relationship with reporting tone. This may indicate that larger committees encourage more extensive discussion of significant matters and contribute to a more balanced or positive linguistic presentation. The result suggests that committee structure can affect the framing of audit information, not merely its quantity.

Audit committee independence also had a positive and significant association with audit reporting tone. Independent members may strengthen the objectivity of communication between auditors and management, enabling the auditor to present significant matters with greater clarity and confidence. Stronger independence may also reduce managerial influence over auditor wording, resulting in a tone that more directly reflects the auditor's professional assessment. This interpretation is consistent with the broader governance role attributed to audit committee independence [15, 24].

Financial expertise had a significant negative association with reporting tone. One possible explanation is that financially sophisticated audit committees encourage auditors to adopt more cautious, critical, or risk-sensitive language. Because expert members are better able to understand technical accounting risks, they may support more explicit acknowledgement of uncertainty or problematic areas rather than encouraging overly favorable wording.

This result is compatible with studies indicating that accounting expertise affects both the nature and types of KAM disclosures [16, 17]. Given that auditor tone conveys perceptions of risk and uncertainty, the finding also supports the proposition that linguistic tone is an economically meaningful dimension of auditor communication [12].

Gender diversity, experience, tenure, and multiple memberships all had positive and significant relationships with audit reporting tone. These findings indicate that committees characterized by broader perspectives, accumulated experience, greater organizational familiarity, and wider professional exposure may shape the linguistic framing of KAM communication. Diverse and experienced committees may improve communication processes with auditors and reduce ambiguity in the reporting of significant matters. Multiple memberships may expose committee members to reporting practices across different firms, enabling them to bring comparative knowledge into discussions with external auditors. These findings are broadly consistent with the literature emphasizing the importance of audit committee diversity, professional experience, and interlocking relationships in determining audit and disclosure outcomes [13, 19, 21].

Membership overlap was not significantly associated with reporting tone. Although overlapping membership increased the number of KAMs, it did not significantly influence the linguistic framing of those matters. This distinction suggests that broader access to internal governance information may increase the identification of significant audit matters without necessarily determining how auditors describe them. Conversely, professional reputation had a significant negative association with reporting tone. Reputable committee members may encourage more conservative, precise, and less promotional reporting because their professional standing creates strong incentives to avoid overly optimistic language. This interpretation is consistent with the broader evidence that auditor reporting tone contains meaningful information and can shape users' perceptions [12].

Taken together, the findings indicate that the audit committee affects KAM reporting through multiple channels. The number of KAMs appears to be particularly sensitive to technical expertise, gender diversity, tenure, and internal committee overlap, whereas readability is more strongly associated with committee size, expertise, diversity, experience, tenure, and professional reputation. Reporting tone is influenced by an even broader set of characteristics, including size, independence, expertise, diversity, experience, tenure, multiple memberships, and reputation. This multidimensional pattern supports the emerging literature suggesting that KAM quality should not be evaluated solely in terms of disclosure quantity [9, 11]. The results are also consistent with Iranian evidence showing that the implementation and determinants of KAM reporting depend on governance arrangements, firm characteristics, and auditor judgments [26-28]. Moreover, the findings reinforce evidence that KAM disclosures can have consequences for investor judgment, investor sentiment, earnings uncertainty, audit pricing, and reporting delay, thereby highlighting the economic importance of improving their quality [4-7]. Overall, the results support the view that effective audit committees contribute not only to oversight of financial reporting but also to the quality of communication embedded in the independent auditor's report.

The findings of this study should be interpreted in light of several limitations. First, the sample was restricted to manufacturing companies listed on the Tehran Stock Exchange, while financial institutions, banks, insurance companies, and investment firms were excluded because of their distinctive regulatory and reporting structures; therefore, the findings may not be directly generalizable to all industries. Second, the study relied on publicly available information disclosed in audit reports, financial statements, accompanying notes, and corporate governance information, meaning that informal interactions between audit committee members, management, and external auditors could not be directly observed. Third, the measurement of readability and tone was based on textual indicators that may not fully capture all semantic, contextual, and linguistic characteristics of Persian-

language audit reports. Fourth, although the regression models included several important control variables, other factors such as auditor industry specialization, audit partner characteristics, ownership concentration, board effectiveness, internal audit quality, organizational complexity, and firm-level risk may also influence KAM reporting. Finally, the relatively short observation period following the implementation and development of KAM reporting in Iran may limit the ability to capture long-term changes in reporting behavior and institutional learning.

Future studies can extend the present research in several directions. Researchers may examine financial institutions and other regulated industries separately to determine whether the relationships identified in this study vary across sectors. Longitudinal studies covering a longer period can investigate whether the influence of audit committee characteristics changes as auditors, companies, and investors become more familiar with KAM reporting requirements. Future research may also employ advanced textual-analysis techniques, natural language processing, machine learning, and large language models to measure readability, specificity, uncertainty, sentiment, boilerplate language, and semantic similarity in KAM narratives. Additional studies could examine moderating or mediating effects of audit firm size, auditor industry specialization, audit partner characteristics, board structure, ownership concentration, institutional ownership, financial distress, internal control quality, and corporate risk. Cross-country studies involving Iran and other emerging markets could also identify whether institutional quality, cultural characteristics, enforcement mechanisms, and corporate governance regulations alter the relationship between audit committees and KAM reporting. Qualitative interviews with audit committee members, external auditors, and chief financial officers may further clarify the mechanisms through which audit committee discussions influence the final content, readability, and tone of Key Audit Matters.

The findings provide practical implications for regulators, boards of directors, audit committees, audit firms, and listed companies. Regulatory bodies should place greater emphasis on the professional composition of audit committees rather than relying solely on formal requirements concerning committee establishment. Companies should seek to appoint members with strong financial and accounting expertise, relevant audit committee experience, diverse professional and gender backgrounds, and sufficient firm-specific knowledge. Regular training can improve members' understanding of Key Audit Matters, complex accounting estimates, audit risks, and effective communication with external auditors. Boards should also carefully manage the workload and multiple appointments of audit committee members to ensure that external experience does not reduce the time devoted to company-specific monitoring. Audit committees should review not only which matters are reported as KAMs but also whether the descriptions are sufficiently clear, concise, understandable, balanced, and free from unnecessary technical language. External auditors can similarly benefit from more structured communication with audit committees regarding the wording and informational quality of KAM disclosures. Strengthening these practices can improve the transparency, readability, and communicative usefulness of independent audit reports and enhance their value for investors and other financial statement users.

**Authors' Contributions**

Authors equally contributed to this article.

**Ethical Considerations**

All procedures performed in this study were under the ethical standards.

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## Conflict of Interest

The authors report no conflict of interest.

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